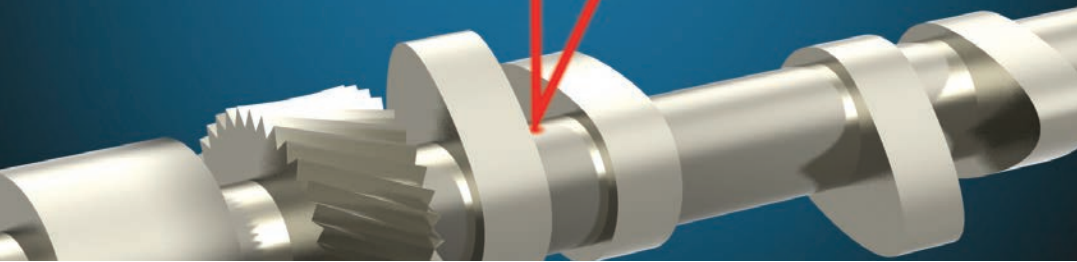


LH Series

High-Speed, High-Precision Laser Sensors



Robust laser for displacement or thickness measurement on real world targets

The L-GAGE LH Series laser displacement sensor from Banner uses state-of-the-art technology to take extremely accurate measurements and comes with easy-to-use software for a simple setup. These robust laser sensors self-synchronize to take measurements on the micron level and calculate thickness without an external controller. Available with both analog and serial outputs, this high-precision laser technology can take measurements on virtually any material including wood, metal, rubber, ceramic and plastic.

- ▶ Non-contact measurement for use on moving processes, hot parts, machined parts, soft or sticky parts
- ▶ High resolution 1024 pixel CMOS linear imager capable of micro-meter level resolutions
- ▶ Sensors self-synchronize for thickness measurement and calculation within the sensors; no external controller needed
- ▶ PC-based software application for easy, step-by-step sensor set up, simple data collection and performance monitoring
- ▶ A network of up to 32 displacement and thickness sensors can be configured for combined measurement
- ▶ Displacement or thickness measurement outputs available on 4-20 mA or RS-485 serial communication with RS-485 Modbus or LH-Network interface adaptors available
- ▶ Three measurement ranges available depending on the model

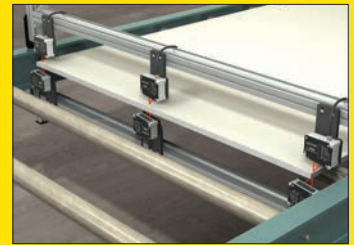
Accurate measurements on multiple surfaces



Dough Thickness
Sensors measure the height of dough, adjusting the machine roller for thickness control



Tire Run Out
By making accurate measurements on the extremely dark, porous tire surface, sensors check for defects and ensure the tire has been properly molded



Drywall Thickness
A network of sensors is strategically placed to make continuous thickness measurements on drywall core and ends


40-plus years of sensor design experience, quality control, sales support and cost-effective solutions:

- ▶ Banner quality products with global availability
- ▶ Rapid customization with most products shipping in 3 days or less
- ▶ Industry's largest force of application engineers to solve your toughest challenges
- ▶ More than 3,000 factory and local field representatives to serve you



more sensors, more solutions

LH Series Laser Sensors, 18-30V dc

Sensing Mode	Models	Range	Resolution* (micron)	Linearity (micron)	Temperature Effect (micron/°C)	Output	Measurement Rate** (Hz)
 DIFFUSE LASER	LH30IX485QP	25 to 35 mm	1	10	1	Analog 4 to 20 mA and RS-485	300 to 4000
	LH80IX485QP	60 to 100 mm	4	40	4		
	LH150IX485QP	100 to 200 mm	10	100	10		

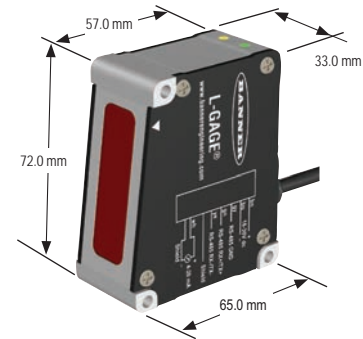


For technical information

* Resolution is with white ceramic with 64 measurements averaged.


** Sensor automatically adjusts its measurement rate based on target color and condition. Typical measurement rate is 4,000 Hz. The response speed can be locked for applications requiring a consistent measurement rate.

Dimensions




Quick-Disconnect (QD) Cordsets




8-Pin M12/Euro-Style with Shield—Single-Ended

Description	Models	Length
 Straight	MQLH-806-F	1.83 m
	MQLH-815-F	4.58 m
	MQLH-830-F	9.14 m



8-Pin M12/Euro-Style with Shield—Double-Ended

Description	Models		Length
	Female/Male	Male/Male	
 Straight	—	MQLH-801-MM	0.30 m
	MQLH-806-MF	—	1.83 m
	MQLH-815-MF	—	4.58 m
	MQLH-830-MF	—	9.14 m



8-Pin M12/Euro-Style—Splitter

	Models	Length	
		Branches	Trunk
	CSB-M1280M1280-LH	No Branches	No Trunk
	CSB-M1281M1282-LH	2 x 0.6 m	0.3 m
	CSB3-M1281M1282-LH	3 x 0.6 m	0.3 m

Serial Adaptors

Description	Model
 USB to RS-485 serial adaptor with integral communication cordset and USB cable for easy configuration of a single sensor or a network of sensors	INTUSB485-LH
 RS-485 MODBUS RTU interface for PLC to LH Sensor communication with M12 Euro-style to M12 Euro-style quick disconnect at both ends	INTMOD485-LH

Brackets

Models	Description
 SMBLH1	<ul style="list-style-type: none"> Main mounting bracket for LH sensor T-slot or "bolt-on" bracket for mounting one sensor Anodized aluminum
 SMBLH30 SMBLH80 SMBLH150	<ul style="list-style-type: none"> LH series adjustable brackets; Separate brackets based on individual LH models Brackets for thickness and displacement measurement Anodized aluminum



Banner Engineering Corp.

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