



High-resolution camera and laser configuration for measuring complex features



Fast measurement speed with configurable measurement volume



Robust, industry-proven sensor for repeatable, accurate measurement



Non-contact solution for inline, nearline, and offline gauging and precision robot guidance



HELIXHD

3D Scanning Sensor Optimized for In-Line Measurement



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About HelixHD

The HelixHD is the latest version to our Helix family of plant floor metrology sensors. The best-in-class scan acquisition improves point cloud quality and measurement repeatability significantly. Whether the root cause of your quality challenge comes from your assembly process or stamping process, HelixHD provides the data you need for quick resolution.

HelixHD is built for the plant floor.

The HelixHD sensor family utilizes the latest optical and laser technologies to provide pristine measurement data on the most demanding materials, such as machined steel, aluminum, carbon fiber, sheet metal, and painted surfaces. With its IP67 rating (dust tight, immune to temporary water immersion), the rugged sensor housing offers reliable protection against the adverse conditions of an industrial production line.

By pairing a high resolution camera with a green laser, Perceptron has achieved an unparalleled signal-to-noise ratio for its HelixHD sensor family that is superior to other sensors on the market.

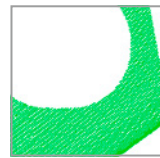


Technical Data	
Measuring Principle	Laser Line Triangulation
Operating Temperature	10 - 45°C
Communications	PoE Class 4
Laser	Green 520 nm wavelength
Safety	Class 2M or 3R IEC 60825-1:2014
Certification	CE
Protection	IP67

HIGHLIGHTS

- Large working volumes to handle part positioning variation.
- Available in multiple standoffs, 200 mm to 1400 mm, for application and layout flexibility.
- Robot or structure mounting options to fit cycle time and measurement requirements.
- Factory calibrated and rectified so each sensor arrives ready to measure.
- Single cable connectivity via Power over Ethernet (PoE) simplifies robot dress package setup and system maintenance.
- Optimized acquisition speed and ability to capture multiple features from one position.

SPECIAL FEATURES



Thin Laser

The very thin laser line enables reliable measurement of threaded holes, studs, hemmed edges, and other complex features.



Speed of Measurement

Industry-leading ability to adapt sensor scan volume and spacing based on feature type and cycle time.

Sensor Type	Depth of Field (mm)	Field of View at Standoff (mm)		Length (mm)	Weight (kg)
		X	Y		
X200	175	150	140	170	1.73
X300	300	195	201	216	2.00
X400	225	200	200	245	2.18
X800	225	220	180	407	3.19
X1100	225	210	175	528	3.95
X1400	225	210	165	649	4.73