SUCCESS STORY
Roller detection in bearing parts

Customer
SPM Machine manufacturer - OEM

Customer Requirements
Detect roller in hole size of 2X1.6 mm of Automotive parts thirst needle bearing cage at distance of 200 mm

Orchid Solution :
High precision laser displacement sensor

Inspections use distance to verify parts presence and position, and intensity to verify color or part orientation

Customer Benefits
- Increase quality control
- Precise part detection
- Reduce down-time
- Keylock function available

Product features
- Rugged laser displacement sensor
- Easy to Use, problem solver
- Bright LED output indicator
- 18 mm dia Cylindrical housing and also side mounting
- Class 1 laser with highly visible laser
- Minimum object detection size 0.5 mm
- Wash down area – Protection class IP69K
- Repeatability : ± 0.5 mm of range

Products Look

Learn More
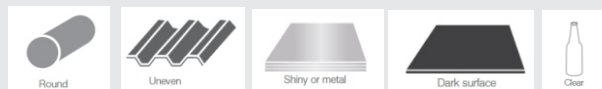Visit www.orchidtechnology.in for more application

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Distance: Precision Measurement and Detection Regardless of Target

Minimum object detection size for challenging targets (6% reflectivity) at close range.

Q4X...100 / 110	0.5 mm
Q4X...300 / 310	1 mm
Q4X...500	1 mm
Q4X...600 / 610	1 mm

Application
Roller detection in bearing parts(thirst needle bearing cage)

Challenge
Because of shiny black color , photoelectric sensor can not suitable for these application. Hole size is very small 2 X1.5 mm at a distance of 200 mm and object is continuously rotating.

Solution
We used laser displacement sensor with function of dual mode.
It works with distance of intensity to detect any change.
Laser sensor face is mounted in front of plastic bearing parts and capable to detect sub millimeter in distance, easily detect slight variations in heights
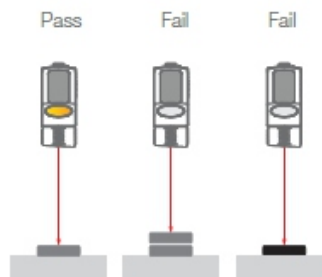
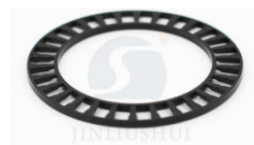### Dual mode : Distance with intensity to detect any change

Challenging Targets

Dynamically adjusted laser power increases output for dark targets or objects at steep or uneven angles , while reducing power of shiny targets, providing accurate measurements across a wide range of challenging targets
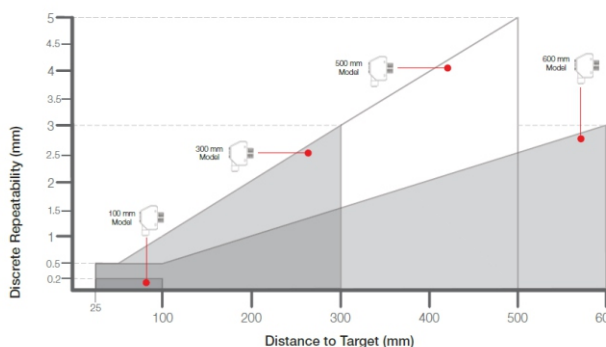
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