

												
	Inductive		Capacitive		Photoelectric		Laser		Ultrasonic		My-Com	
Sensing Range	1mm to 15mm				1mm to 20m		1mm to 8m		10mm to 3m		Contact	
Target Characteristics	Metal only		Metals, non-metals, liquids and powders		Almost any target surface, caution with clear objects				Any target surface except sound-absorbing foams		Solid surface that can provide tactile feedback	
Sensing Speed	1 to 20kHz		15 to 50Hz		10µ seconds to 2.5ms				10 to 160ms		10Hz frequency	
Outputs	Digital and analog		Digital		Digital and analog				Digital, analog, two-point		Digital	
Environment	Operates in clean and dirty areas – IP67				Usually cleaner environments — must be mindful of soil build-up on lens				More tolerant of dirt than photoelectrics, similar issues with dirt build-up		Clean and dirty dependent on model	
Applications	<ul style="list-style-type: none"> • Presence or absence of a metal target • Gear tooth/chain counting • Detection of a vacuum seal on food jar lid pop-ups • Missing metal lid detection or not fully seated • Jam detection on conveyors or presses • Tension control on shrink wrappers • Detection of metal foil inside packaging QC 		<ul style="list-style-type: none"> • Liquid level inside a container — through side wall • Reservoir fill level of liquid or powder • Detection of water in an oil solution • High level/low level of feed hoppers tanks • Able to sense certain materials through another 		<ul style="list-style-type: none"> • Able to detect the widest range of different targets at greater distances overall • Absence/presence of bottles/boxes on conveyor • Correct color cap/package confirmation • Defect in material/size gauging (analog) • Small parts counting on conveyor or confirmation of items in box • Open box-flap detection or downed product • Product height in tanks and individual containers • Orientation of product on conveyor or within tooling fixture • Print mark registration • Packaging machine indexing/positioning • Counting of shingled streams of flat cartons 		<ul style="list-style-type: none"> • Clear-object detection • Liquid level height (analog) • Clear film monitoring/web control • Hopper fill levels — analog or Hi/Lo with two-point teach 		<ul style="list-style-type: none"> • Calibrating of precise equipment — home position switch • Double sheet detection • End of travel limit switch • Out of tolerance detection — QC 		<ul style="list-style-type: none"> • Medical equipment – CAT and MRI systems • AGV control and positioning • Feedback on heavy equipment components • Printing and Graphics equipment • Monitoring of rotating shafts in various types of equipment • Controlling conveyor speed and travel distance • Turn-table position • Monitoring and coordinating multi-step assembly processes • Robotic arm positioning • Tool and machine calibration 	
Pricing Range (approximate)	\$35 to \$370				\$72 to \$1,425		\$266 to \$2,395		\$199 to \$669		\$99 to \$377	
Special Features	<ul style="list-style-type: none"> • High precision, “teachable” linear models. • Self-contained miniatures as small as 3mm. • Numerous housing styles and mounting choices. 				<ul style="list-style-type: none"> • Background suppression for extremely precise detection. • “Teachable” units for target recognition. • Laser distance measuring units with micron accuracy. • The same technology and performance in different housing configurations. 		<ul style="list-style-type: none"> • “Teachable” sensing ranges in analog and digital outputs. • Miniature housings with fully contained electronics and programming. • Remote teach-in. 		<ul style="list-style-type: none"> • Micron repeat accuracy — imitated but never duplicated. • IP67 units for wet applications. • Different housing styles. 		<ul style="list-style-type: none"> • Various mechanical configurations, Bus network communication, special output features and programming. • Innovative technology that provides performance and price advantage. 	

This chart is to be used as a guideline only in selecting a sensor. Please contact a Baumer Application Engineer with any questions about your particular needs. Thank you.