K50Z Multipoint Sensors

Multipoint Sensing with One Device

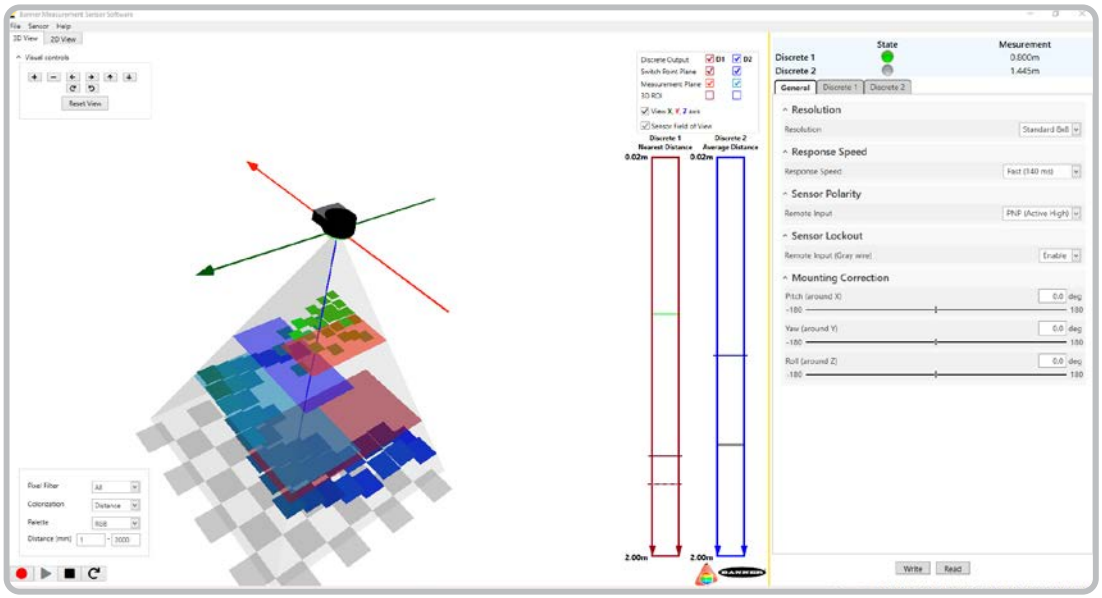
- Detect more reliably across a wide area
- Use less hardware and save commissioning time
- Customize configuration with intuitive Banner Measurement Software

Wide-Area Detection Can Monitor Two Separate Areas

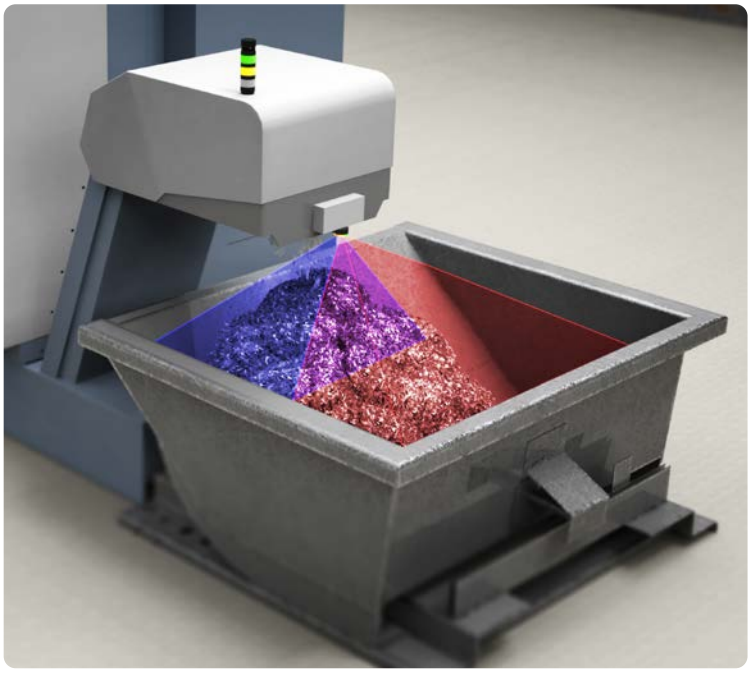
Multipoint Sensing with One Device

- Detect more reliably across a wide area
  - 45° x 45° beam angle and 2 meter range allow for detection in a large area
  - 64 measurement points can capture the nearest distance and average height over a large area, yielding more information than a single point sensor
  - 3D time of flight technology measures angled targets more reliably than other methods, including ultrasonic
- Use less hardware and save commissioning time
  - Two independently configured outputs let operators monitor two separate areas
  - Less hardware is required by replacing two sensors with one
  - Sensor configuration can be customized to fit the application

Complete Configuration with Banner Measurement Sensor Software



- Customize region of interest to detect only what is intended
- Program easily using visualization of what sensor sees
- Independently configure both outputs and use fewer sensors
- Reduce time to program multiple sensors by saving and loading configurations
- Download and use software for free



See Complete Bin Fill Levels with Two Measurements

Challenge

Metal shavings from machining automotive parts fill up a scrap bin. The area nearest the outlet fills up faster than other parts of the bin. Multiple sensors are needed to monitor different areas of the bin to prevent overfilling, plus another sensor that monitors the fill level and alerts an operator to spread out the shavings.

Solution

Rather than multiple sensors, a single K50Z has a large 45 x 45 degree viewing area, 64 measurement points, and two independently configured outputs. One output can track peak height and monitor for overfill protection at the outlet, while the other output can track average height and monitor the fill level in the rest of the bin. During setup, these outputs are visualized in the PC GUI so the operator can see exactly what the sensor sees, simplifying configuration.

Prevent Waste on Pallet Wrapper Using One Sensor

Challenge

As a wrapping machine revolves around a pallet, it needs to know where the top of the stack is so it knows when to stop and prevent wasting wrap. Because the machine is revolving around the pallet, the target is presented at many angles and a single point sensor may occasionally lose signal. Either multiple sensors or a LiDAR sensor have been typically used, but both options can be expensive.

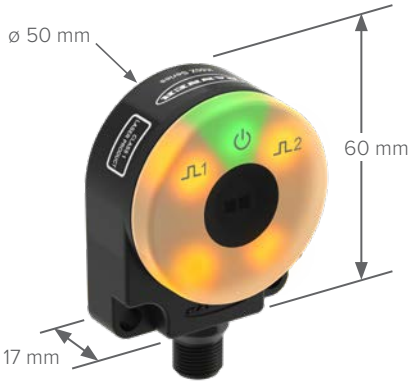
Solution

With its wide viewing angle, 64 measurement points, and 3D time of flight technology, one K50Z can detect the edges of the pallet and easily measure the top of the pallet and indicate the point at which the equipment needs to stop.

K50Z Multipoint Sensors

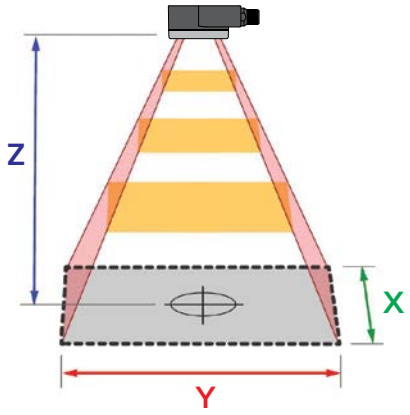
Series		Housing Style		Field of View	Sensing Range	Communications	Output		Connector
K50Z	–	**F**		**A**	**2000**	**K**	**D**	–	**Q8**
		F = Flush mount		**A** = 45 x 45 degree	**2000** = 2000 mm	**K** = IO-Link	**D** = Dual discrete		**Q8** = 5-pin integral M12

Specifications



Supply Voltage	10 to 30 V DC
Range	20 mm to 2 m
Beam Angle	45° x 45°
Response Time	Standard: 140 to 500 ms Reduced: 40 to 140 ms
Construction	Polycarbonate
Operating Conditions	–10 to +50 °C (–14 to +122 °F)
Environmental Rating	IP67
Certifications	CE UKCA

Field of View Dimensions



Z (mm)	Y (mm)	X (mm)
20	17	17
500	414	414
1000	828	828
1500	1242	1242
2000	1657	1657

Accessories

Required Accessory for Device Configuration

PRO-KIT
Power supply, splitter, Pro converter cable

SMBAMSK50R
Adjustable mounting bracket

SMBK50RA
Right-angle mounting bracket

5-Pin M12
Straight connector models listed; for right-angle models, add **A** to the end of **M12F5** (example, BC-M12F5A-22-2)

BC-M12F5-22-2
2 m (6.5 ft)
BC-M12F5-22-5
5 m (16.4 ft)
BC-M12F5-22-10
10 m (32.8 ft)

5-Pin M12
Double-Ended Straight/Straight

BC-M12F5-M12M5-22-2
2 m (6.5 ft)
BC-M12F5-M12M5-22-5
5 m (16.4 ft)
BC-M12F5-M12M5-22-10
10 m (32.8 ft)

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