

SPECIAL FOCUS

Level indicators that connect to the cloud

BinMaster has put forward for industry consideration a range of four sensors that can provide cloud-based connections in accurately mapping and measuring silo and bin content. It says its level sensors play a leading role in utilising cloud technology developments for a range of industries including those in grain storage and handling.

Cloud-based programs are compatible with a wide range of sensors and measurement technologies. Their versatility lends them to be used with vessels of vastly different shapes and sizes, storing all types of powders, solids or liquids, says the company.

It adds that its range of sensors provide better accuracy, improve safety - eliminating the need for staff to climb structures - and saves time. The four most suitable for grain storage include the Non-Contact Radar, the 3D Level Scanner, the SmartBob and the Laser.

Non-Contact Radar

The BinMaster NCR-80 is a non-contact radar level sensor designed for superior performance in extremely dusty powders and bulk solids. Its powerful 80GHz frequency focused in a narrow 4° beam angle with a measuring range up to 393 feet (120 metres) and accuracy within 0.2 inches (0.51cm) means it excels in tall and narrow vessels.

The NCR-80 is offered with a 10° swivelling, stainless steel flange for precise targeting; a lightweight plastic antenna with an 8° swivelling flange or a mounting strap for adjustable targeting; or a 1-1/2" (2.54-3.81cm) NPT mounting option for use in an existing process connection. It is resistant to interference, while its advanced filters ensure rapid signal processing and an update rate of less than one second.

The NCR are easy to setup using Bluetooth on a phone and then send level measurement data to BinView® software, a local display, or a PLC. The sensors offer a measuring range up to 98 feet (30 metres) and install in existing vessel openings or non-intrusively when measuring levels in plastic vessels.



3D Level Scanner

BinMaster's 3D Level Scanner, also known as a 3D Solids Scanner, is the only level sensor that measures multiple points on a material's surface, providing continuous, non-contact inventory volume measurement that accounts for irregular material topography. This advanced acoustics-based technology is proven to perform in powders and bulk solids contained in bins, silos, domes, warehouses as well as open bunkers and piles.

The 3D scanners provide continuous, non-contact level measurement using dust penetrating technology for unsurpassed bin volume accuracy. Unlike single point devices, BinMaster's 3D Level Scanners measure multiple points to detect irregular material surfaces, cone up/down conditions or sidewall build up.



SmartBob

The SmartBob works like an automated tape measure, dropping a weighted cable to a solid material surface at timed intervals. The SmartBob II Remote is a proven, reliable level measurement system using cable-based sensing technology. Combined with the powerful eBob software and remote control consoles, SmartBob II offers the strongest and smartest cable-based inventory measurement system on the market today – with the ability to manage from one up to 255 bins with heights up to 150 feet (45 metres).

SmartBob II can be uniquely configured using a variety of cables, probe designs and special options for solid, slurry, brine and liquid applications. Long-lasting, hassle-free service is ensured by SmartBob's cable cleaning system. SmartBob II is extremely rugged, featuring the industry's strongest cable and motor design completely sealed in a strong, lightweight moulded polycarbonate enclosure which is explosion proof and rated for Class II, Groups E, F & G certifications, requiring no field calibration.



Laser

Measuring in a tight beam, lasers are suited for narrow vessels and lower or no-dust environments. Mounted and powered level sensors on silos without the complexity or expense of wiring, this single point laser installs quickly on silos or in remote locations where inventory monitoring has not been feasible. Powered by a replaceable Lithium battery, the SPL-200 measures solids in silos up to 98 feet tall (30 metres) in low or no-dust environments. The FVL-200 measures livestock feed in silos up to 35 feet tall (10 metres). Both models take interval readings from once per hour to once a day with a battery life of three to five years.

