



## Bucket Elevator Hazard Monitoring Sensors

Bucket elevator monitoring for belt and pulley misalignment, underspeed conditions, bearing and surface temperature, and plug conditions enhance the performance and service life of a bucket elevator. Monitoring for potential hazards eliminates any unwanted downtime by alerting operators to possible equipment malfunctions and prevents damage to other conveying and processing equipment.

For bucket elevators with multiple hazard monitoring sensors, a common solution is the 4B Components Watchdog Super Elite monitoring system to conveniently process all sensor signals through a single system.

### Features

**Watchdog Super Elite** – Easy to install and simple set up monitoring system to process signals from belt and pulley misalignment sensors, speed sensors, temperature sensors, and plug sensors. When a potential hazard is detected, an alarm sounds and provides shutdown control of the bucket elevator and feeding system.

**Bearing Temperature Sensor** – 4B Components ADB series bearing temperature sensor monitors bucket elevator bearings for maintenance issues. Sensors are fitted with a grease zerk to allow lubrication of the bearing without removing the sensor.

**Surface Temperature Sensor** – 4B Components ADB lug series surface temperature sensor mounts directly to a motor, gear reducers, or bucket elevator casing for continuous temperature monitoring.

**Belt Misalignment Sensor** – 4B Components Touchswitch is a force activated belt and pulley misalignment sensor that detects tracking and misalignment problems. When a belt or pulley becomes misaligned and contacts the sensor, an alarm sounds and shuts down the bucket elevator.

**Speed Sensor** – 4B Components M800 Elite speed sensor is designed to detect belt slip, belt underspeed, low speed or zero speed on bucket elevators. The M800 speed sensor is normally paired with 4B Components Whirligig Universal Shaft Sensor Mount for easy installation on the bucket elevator boot shaft.

**Plug Sensor** – 4B Components Binswitch elite sensor detects level or plug situations in a bucket elevator discharge chute. The sensor is fully enclosed inside a nylon body that is corrosion and abrasion resistant, dust tight and waterproof.

### Benefits

**Protect Equipment from Damage** – Belt and pulley misalignment sensors, speed sensors, temperature sensors, and plug sensors send a signal to indicate equipment malfunction. The bucket elevator and other conveying and processing equipment can be shut down before unforeseen damage occurs.

**Reduced Maintenance and Downtime** – Bucket elevator hazard monitoring improves reliability by continuously monitoring all potential hazards. Downtime and maintenance costs are greatly reduced.



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Watchdog Super Elite Monitoring System Detects Potential Hazards



Bearing Temperature Sensor Detects Potential Problems



Surface Temperature Sensor Measures Temperature of Motors, Gear Reducers and Bucket Elevators



Belt Misalignment Sensor Detects Belt Tracking Issues



Speed Sensor Detects Belt Slip, Underspeed, or Zero Speed



Plug Sensor Detects Material Plugs in Chutes



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