Hazard Monitoring Systems

A complete line of hazard monitoring systems and accessories designed for all your equipment monitoring requirements.
### Combined Monitoring Systems

**T500 Elite Hotbus™**

- Monitors up to 8 bearing sensors
- Includes 2 separate alarm and 2 separate stop relays
- Short circuit / open circuit fail-safe detection
- Status LEDs provide quick location of the hot bearing condition
- A range of alarm temperatures available from 110° F to 180° F
- Alarm mute - with automatic time delayed reactivation

**Watchdog™ Elite**

- Monitors elevators and conveyors
- User friendly menu set-up
- LED displays belt speed
- LCD message center screen displaying status
- Fully programmable to optimize elevator/conveyor operation
- LED alarm indication and power status
- Relay contacts and RS485 outputs
- PLC interface and optional software
- Alarm and shutdown features
- Wireless connectivity options

**Features**

- Monitors multiple elevators and conveyors (up to 256 sensors)
- LCD displays system status
- RS485 serial communication
- Enter your own sensor/location names for easy identification
- Alarm and shutdown features
- Wireless connectivity options
- HazardMon.com® cloud based hazard monitoring compatible

### Temperature Monitoring

**T400N Elite Hotswitch**

- Monitors up to 8 bearing sensors
- Includes 2 separate alarm and 2 separate stop relays
- Short circuit / open circuit fail-safe detection
- Status LEDs provide quick location of the hot bearing condition
- A range of alarm temperatures available from 110° F to 180° F
- Alarm mute - with automatic time delayed reactivation
- PLC board (optional)

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### Sensor Options

- WDB or ADB Series: bearing temp.
- Touchswitch: belt alignment
- M800 Elite Speed Switch: speed
- Auto-Set Series: level indicator
- Roto-Level Series: level indicator
- Binswitch: level and plug indicator

### Input Supply Volt.

- 120 to 240 VAC
- 24 VDC (Universal Supply)

### Sensor Supply

- Use external 24 VDC supply

### Approvals

- Class II Div. 1, Groups E, F, G
- Class II Div. 2, Groups F, G
- Europe - CE, ATEX, IECEx (Available)
- Russia - GOST-R (Available)

### Applications

- Bucket Elevators and Conveyors

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### Applications

- Bucket Elevators and Conveyors
## Belt Alignment Monitoring

**A400 Elite Trackswitch**

- The A400 Elite Trackswitch is a microprocessor based control unit which uses high power magnetic sensors that detect moving metallic buckets or bolts from either one or two bucket elevators. The unit is able to provide an alarm and automatic shutdown of the elevator when a belt misalignment condition is detected.
- Uses up to 4 WDA magnetic (reluctance) alignment sensors
- Monitors alignment of belts in two separate elevators or top and bottom alignment in one elevator
- Includes 2 separate alarm and 2 separate stop relays
- Simple, reliable, consistent. Fully functional test via push button on front panel
- H" x W" x D"
- 9.7" x 7.4" x 4" (Application: Belt Bucket Elevators)

**B400 Elite Beltswitch**

- The B400 Elite Beltswitch is a microprocessor based control unit which uses sensors to detect belt misalignment by pressure (Touchswitch) from one or two elevators / conveyors. The unit is able to provide an alarm and automatic shutdown of the elevator/conveyor when a belt misalignment condition is detected.
- Uses up to 4 touch or contact alignment sensors
- Monitors alignment of belts in two separate machines or top and bottom alignment in one machine
- Includes 2 separate alarm and 2 separate stop relays
- Simple, reliable, consistent. Fully functional test via push button on front panel
- H" x W" x D"
- 9.7" x 7.4" x 4" (Application: Belt Bucket Elevators)

## Alarm Monitoring

**X400 Elite Alarmswitch**

- The X400 Elite Alarmswitch is a microprocessor based control unit which is able to accept contact style signals in 8 separate zones. Alarm and status LEDs provide quick location of the alarm. A single local and optional remote alarm mute push button acknowledges any alarm condition.
- Monitors up to 8 zones
- Includes 1 alarm and 1 stop relay
- Multiple alarm inputs from different sensors
- LED alarm indication and power status
- Alarm mute - local and remote (reactivation on new alarm)
- Test feature
- PLC board (optional)
- H" x W" x D"
- 9.7" x 7.4" x 4" (Application: Belt Bucket Elevators, Conveyors, Silos & Bins)

## Model Details

<table>
<thead>
<tr>
<th>Model</th>
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</tr>
</thead>
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### Features

- **Sensor Options**
  - WDA Series: motion alignment
  - Touchswitch: force/contact activated
  - Auto-Set Series: level indicator
  - Roto-Level Series: level indicator
  - Binswitch: level and plug indicator
  - Touchswitch: belt alignment
  - M300 Slipswitch: speed

- **Input Supply Volt.**
  - 120 to 240 VAC
  - 24 VDC (Universal Supply)

- **Sensor Supply**
  - 24 VDC

- **Approvals**
  - Class II Div. 1, Groups E, F, G
  - Europe - CE, ATEX, IECEx (Available)
  - Russia - GOST-R (Available)

- **Applications**
  - Belt Bucket Elevators

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**4B Components Limited**

4B Components Limited is a leading manufacturer of industrial solutions, providing reliable and high-quality products for various industries. Our focus is on delivering innovative and efficient solutions to meet the needs of our customers globally. If you have any questions or need further information, feel free to contact us.

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**Contact Information**

[4B Components Limited Website]

[Contact Us]

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**Additional Information**

- **Product Line**
  - 4B Components Limited offers a wide range of industrial solutions, including control units, alarms, and sensors.

- **Customer Support**
  - For technical support or product inquiries, please visit our website or contact our support team.

- **Safety and Compliance**
  - All our products comply with international standards and regulations, ensuring safety and reliability in various applications.

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**Technical Specifications**

- **Dimensions**
  - 9.7" x 7.4" x 4" (Models)
These illustrations show typical sensor placements for monitoring: speed, motion, bearing & surface temperature, belt alignment, level / plug indication and slack chain detection.

The T500 Elite Hotbus and Watchdog Elite monitoring systems have wireless connectivity options.
1. **Bearing & Surface Temperature**

The WDB and ADB series bearing temperature sensors are designed to screw directly into an existing grease zerk fitting on a bearing housing. Each sensor is fitted with a grease nipple to allow lubrication of the bearing without the need for removal of the sensor. The WDB series is available with either a PTC thermistor with various factory set trip points or an NTC thermistor with a user adjustable trip point.

The ADB series have been designed to allow the depth of the sensor to be adjustable depending on your application. The ADB series is available with NTC thermistors and have probe lengths of 2”, 4” and 8”.

RTD Platinum (PT100) and other sensor styles are also available.

2. **M800 Elite - Speed Switch**

The M800 monitors rotating machinery for dangerous underspeed conditions. An inductive sensing device located in the nose of the M800 Elite enclosure will detect a metal target. Once the unit is set to the normal machine RPM, it provides alarm and shutdown signals at 10% and 20% underspeed.

- Can be used with the Whirligig® shaft sensor mount

3. **Binswitch - Plug Sensor**

The Binswitch sensor detects level or plug situations for bulk granular solids or liquids in tanks, bins, or silos and can be used as a plug or choke detector in chutes, conveyors and elevator legs. Programmable features include time delay on material arriving or leaving, and fail-safe relay settings for high and low levels.

4. **Roto-Level Series - Plug Sensors**

The Roto-Level series are rotary paddle switches designed to detect high and low levels of bulk granular solids in bins, tanks, silos, and as blockage detectors in spouts.

5. **WDA Series: Motion Alignment**

The WDA Series are non-contacting extended range magnetic sensors used to detect ferrous targets (such as bucket bolts or steel buckets) at a distance of up to 3 inches from the sensor.

6. **Touchswitch™ - Belt Misalignment**

The Touchswitch™ is an electromechanical limit-switch with no moving parts, which detects tracking and misalignment problems on bucket elevators and conveyors. Unlike a rub block that utilizes friction (heat) to activate, the Touchswitch™ is pressure sensitive for safer and more reliable monitoring.

NOTE: Rub blocks are available for special applications. Call the 4B Tech Team to discuss the requirements for your specific application.

7. **P800 - ProxSwitch**

The P800 is an inductive proximity sensor designed to detect shaft speed, shaft position, gate position, or object presence. No contact is made between the sensor and the target being monitored. The P800 will detect a ferrous object at 1/2” and a non-ferrous metal object at a distance of 5/16”.

- Can be used with the Whirligig® shaft sensor mount

8. **Auto-Set™ Series - Plug Sensors**

The Auto-Set™ series are self-contained point level monitors with digital displays for high, intermediate, or low-level detection of liquids, powders or free-flowing granular solids. The Auto-Set™ series incorporates simple push-button calibration with microprocessor enable/disable switch for total protection of stored values. Once the unit is calibrated for a specific application, it never has to be re-calibrated.
4B monitoring systems are unsurpassed in quality and performance.

Manufactured to ISO9001 quality standards, monitoring systems also carry 3rd party approvals for USA, Canada, Europe and Russia.

www.go4b.com/usa

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**Other Products & Services**

**Testing & Commissioning Service**

4B has a dedicated team of technicians providing free over the phone 24 hour technical support to trouble shoot any issue that can occur during or after installation.

Additionally, 4B offers an on site commissioning service to ensure our products have been properly set up and are functioning correctly after your initial installation.

4B also offers service contracts to periodically test and verify that our products are being maintained and working properly to help protect your equipment. For a quote on these services, please contact a 4B technical support representative.

**HazardMon.com®**

HazardMon.com is a secure cloud based hazard monitoring solution providing status notifications and data logging for bucket elevators and conveyors. Live system status, graphs and historical data can be viewed on any web-enabled device (smartphone, tablet PC, desktop or laptop computer). Emails can be sent to notify users whenever a change in the system’s health is detected. An automated maintenance feature allows site operators to verify that all sensors on the system are operational and working correctly.

Visit [www.hazardmon.com](http://www.hazardmon.com) to sign up for a FREE demo account, and see what the cloud can do for you!

**SpeedMaster™ Speed Switch Tester**

The SpeedMaster™ accurately tests the calibration of a speed switch, and allows testing of the 10% alarm and 20% shutdown features of the sensor while installed on the machine shaft.

*Patent Pending*

**ADB Sensor Tester**

The ADB Sensor Tester has been designed to test 4B adjustable depth bearing (ADB) style temperature sensors in the field. With integral controls and temperature display, the unit heats the sensor to the desired trip point, and allows quick and easy real life testing of the sensor and temperature monitoring system.

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**When it comes to supplying you with virtually any material handling component, 4B has it.**

- Speed Switches
- Level Monitors
- Elevator Buckets & Bolts
- Forged Conveyor Chain & More!

www.go4b.com/usa
With subsidiaries in North America, Europe, Asia, Africa and Australia along with a worldwide network of distributors, 4B can provide practical solutions for all your applications no matter the location.

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