BWI EAGLE MOTOR OVERSPEED DECODER

221-4100-AC

221-4100-DC

Failsafe Overspeed Switch

Document Date: 8/29/2024

Product Rev: 0
PIB No: 221-4100

BWI EAGLE

cattron.com/products/bwi-eagle

CATTRON

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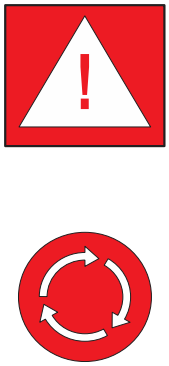
WARRANTY STATEMENT

BWI Eagle Inc. warrants the Air-Eagle Remote Control System, if properly used and installed, will be free from defects in material and workmanship for a period of **1 year** after date of purchase. Said warranty to include the repair or replacement of defective equipment. This warranty does not cover damage due to external causes, including accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing. This limited warranty, and any implied warranties that may exist under state law, apply only to the original purchaser of the equipment, and last only for as long as such purchaser continues to own the equipment. This warranty replaces all other warranties, express or implied including, but not limited to, the implied warranties or merchantability and fitness for a particular purpose. BWI Eagle makes no express warranties beyond those stated here. BWI disclaims without limitation, implied warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not allow the exclusion of implied warranties so this limitation may not apply to you. To obtain warranty service, contact BWI Eagle for a return material authorization. When returning equipment to BWI Eagle, the customer assumes the risk of damage or loss during shipping and is responsible for the shipping costs incurred.

SIGNAL RANGE

Max range statements are estimates based on a clear line of sight with few interferences. Actual range will vary based on transmitting power, orientation of transmitter and receiver, height of transmitting and receiving antennas, weather conditions, electronic interference, terrain, and physical obstacles, including but not limited to; walls, building structures, trees (foliage), metal objects, and landscape (hills, mountains).



WIRELESS STOP, ASTOP, and E-STOP SYSTEMS

Wireless E-STOP systems should never be considered a primary life-saving device. At least one hard-wired switch must be available in the event the wireless system is not operational. Failure to comply may result in serious injury or death to personnel and damage to equipment.

Wireless STOP and ASTOP transmitters are not failsafe emergency stop controls. They are NOT to be used as a life-saving device. They are designed for wireless control of equipment or vehicle remote operation. Failure to use as intended may result in serious injury or death to personnel and damage to equipment.

SCAN ME


INTRODUCTION

The BWI Eagle Motor Overspeed monitors speed and detects motion in machinery in a variety of industrial applications.

The Overspeed Decoder utilizes a non-contacting proximity sensor that can be remotely located up to two miles from the control unit.

Enclosed in a durable DIN-rail mountable polycarbonate enclosure, the control unit conveniently mounts inside an electrical panel or O.E.M. control box. The up-front digital display shows the current RPM in real time, eliminating setting “guesswork” by constantly showing the actual RPM of the apparatus being monitored.

The Motor Overspeed Decoder is ideal for monitoring vehicle overspeed conditions.

INSTALLATION

1. DISCONNECT power from all equipment before proceeding with installation.
2. Mount the Motor Overspeed Decoder inside an existing control panel or other suitable enclosure.
3. Install wiring to the terminal strip. (See TERMINAL STRIP WIRING section.)
4. Install BWI Eagle Proximity Sensor at roller or shaft. (See sensor installation sheet).

TERMINAL STRIP WIRING

FRONT		
Terminal 1	Sensor Input Common (-)	
Terminal 2	Sensor Input (+)	
Terminal 3	Run/Reset Input	
Terminal 4		
Terminal	Not used on this model.	
Terminal		
Terminal		
Terminal		
BACK		
Terminal 7	N/C (1)	When power is applied to the unit, the relays will energize. If an overspeed condition or sensor fault condition is detected, the relays will de-energize.
Terminal 8	Common (1)	
Terminal 9	N/O (1)	
Terminal 10	N/C (2)	
Terminal 11	Common (2)	
Terminal 12	N/O (2)	
Terminal 6	(N) 100-250 VAC (–AC model)	(-) 9-36 VDC (–DC model)
Terminal 5	(H) 100-250 VAC (–AC model)	(+) 9-36 VDC (–DC model)

SPECIFICATIONS

	221-4100-AC	221-4100-DC
Power Supply	100-250 VAC, 5W	9-36 VDC, 5W
Fuse Protected	1 amp	1 amp
Speed Range	30-3100 RPM Factory preset to 60 RPM	30-3100 RPM Factory preset to 60 RPM
Relay Contacts	DPDT 5 amp @ 120 VAC / 30VDC	DPDT 5 amp @ 120 VAC / 30VDC
RPM Accuracy	+/- 0.4%	+/- 0.4%
Repeatability	+/- 0.1%	+/- 0.1%
Fault Delay	5-30 seconds Factory preset to 5 seconds	5-30 seconds Factory preset to 5 seconds
Enclosure	Polycarbonate	Polycarbonate

SET-UP & OPERATION

Set-Up

This model can be set up to either monitor for a sensor fault or not. A sensor fault occurs when no sensor pulses are seen for a period of time. This period can be adjusted (see FAULT TIMER ADJUSTMENT on the following page.

To monitor for sensor fault, install a normally open momentary switch to terminals 3 & 4 on the Motor Overspeed Decoder unit.

To ignore a sensor fault, wire up a normally closed switch to terminals 3 & 4. This will only be used to reset the unit after an overspeed condition.

Overspeed Operation

When an overspeed condition is detected, the control relay in the Motor Overspeed Decoder will open to shut down the equipment. “TRIP” will blink on the display and the relay status will display “OFF”. To clear the overspeed condition, press and release the button wired to inputs 3 & 4. TRIP will stop blinking and the relay status will display “ON”.

Sensor Fault Operation

When a sensor fault is detected, the control relay in the Motor Overspeed Decoder will open to shut down the equipment. “FAULT” will blink on the display and the relay status will display “OFF”. To reset the relay, press and release the normally open reset switch. “FAULT” will stop blinking and the relay status will display “ON”.

TRIP POINT SET-UP

Apply power to the Motor Overspeed Decoder. The factory default settings are as follows: the trip point is 60 RPM, the fault timer is 5 seconds, and the relay is on. (TRIP: 0060 / FAULT: 5 / REL: ON).

Read instructions completely before beginning set-up procedure.

1. Press the SEL button to highlight TRIP.

2. Press the SET button to begin Trip Speed set-up. The trip speed is displayed as 4-digit number. The 1000s digit will be highlighted. Use the SEL button to change the number. Press the SET button to move to the 100s digit. Use the SEL button to change the number. Press the SET button to move to the 10s digit. Continue until all digits are set.

3. Review setting for accuracy. To adjust a digit, press the SET button to move through the digits. Use the SEL button to adjust the digits.

4. When digits are entered correctly press and hold the SET button until all digits of the RPM setting highlight (approximately 2 seconds). Release the SET button.

The RPM setting will be maintained in memory until changed again by the operator.

FAULT TIMER SET-UP

Apply power to the Motor Overspeed Decoder. The factory default settings are as follows: the trip point is 60 RPM, the fault timer is 5 seconds, and the relay is on. (TRIP: 0060 / FAULT: 5 / REL: ON).

Read instructions completely before beginning set-up procedure.

1. Press the SEL button to highlight FAULT.
2. Press the SET button to highlight the timer in seconds.
3. Use the SEL button to increment the timer from 0 to 30 seconds. Holding the SEL button for more than 1 second will auto increment the timer until the button is released.
4. When selection is displayed correctly press and release the SET button. FAULT will be highlighted.

The Fault Timer setting will be maintained in memory until changed again by the operator.

TEST PROCEDURE

A test function has been provided to allow the operator to de-energize the internal control relay and stop the monitored equipment.

Read instructions completely before beginning test procedure.

1. Press the SEL button to highlight TEST.
2. Press and hold the SET button for approximately 2 seconds. The control relay will de-energize and “TEST” will blink.
3. Release the SET button.
4. To reset the relay, press and release the normally closed reset switch. “TEST” will stop blinking and the relay status will display “ON”.

SCREEN RESET

In the event the screen freezes, a screen reset function is available.

1. Press and hold the SEL button.
2. Press the SET button.
3. Release both buttons. The screen will reset to the default display.

ACCESSORIES

Threaded PVC Proximity Sensor	10-7139
I.S. Threaded PVC Proximity Sensor	10-7039
I.S. Zener Barrier	10-7072

DIMENSIONS