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PRODUCT INFORMATION BULLETIN

EAGLE 3 Triple Channel Critical Speed Switch MODEL 12-7000

DESCRIPTION

The EAGLE 3, Model 12-7000 monitors speed and detects motion in all types of rotating electrical apparatus. Three independent channels allow a variety of control functions to meet virtually any application requirement for underspeed, overspeed or zero speed detection from one RPM up to 5000 RPMs. Its rugged NEMA enclosure is well-suited to meet the environmental challenges of any industry. Ideal for conveyors, crushers, fans, motors and other rotating apparatus.

INSTALLATION

DISCONNECT AC Power before proceeding with instructions.

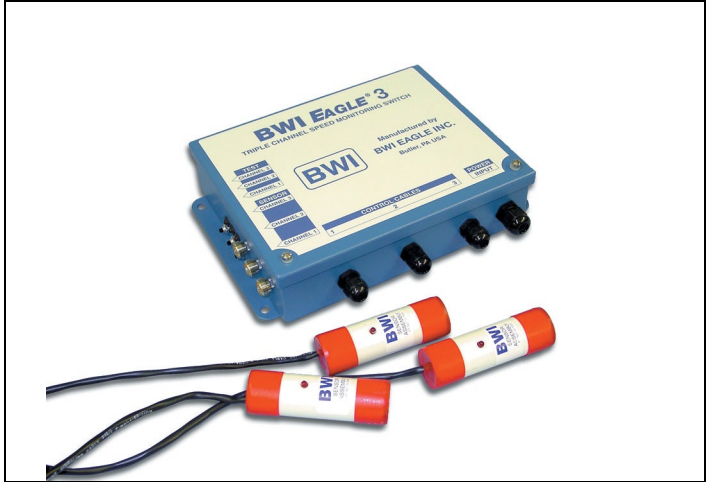
1. Mount the EAGLE 3 control unit in a convenient location.
2. Make the following connections:
 - A. Connect power cable to 120 VAC.
 - B. Connect control cables to proper terminals in the motor control circuit.
 - C. Connect EAGLE VR SENSOR cables to the sensor connectors on the control unit.
3. Install sensors at rollers. See sensor installation sheet.

SETUP AND TESTING

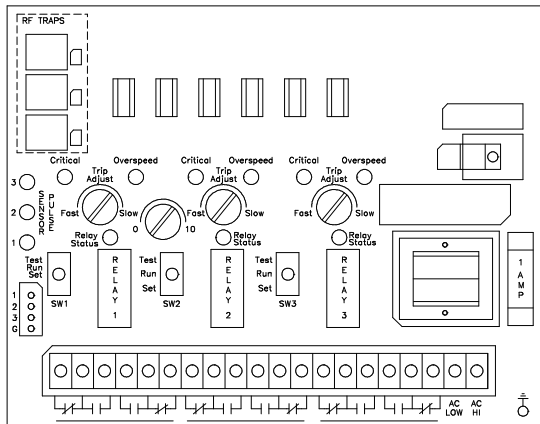
Final calibration should be performed with the belt loaded and running at normal speed.

1. Turn TRIP ADJUST pot CCW until it stops (approximately 7 o'clock).
2. Hold switch in SET position to energize relay.
3. Turn TRIP ADJUST pot CW SLOWLY until CRITICAL SPEED LED stays on continuously.
4. Continue turning TRIP ADJUST pot CW until OUT OF RANGE LED begins to blink. ***
5. After RELAY STATUS LED is illuminated, return switch to RUN position.
6. There is a "safety delay" built into all EAGLE units. This delay leaves the control relay un-energized for 5 seconds after critical speed has been achieved to prevent false machinery actuation during maintenance or assembly.
7. Return switch to RUN position.
8. A momentary TEST position is provided to simulate the loss of sensor signal which releases the control relay.
9. Repeat steps 1 through 8 for remaining sensor adjustments.

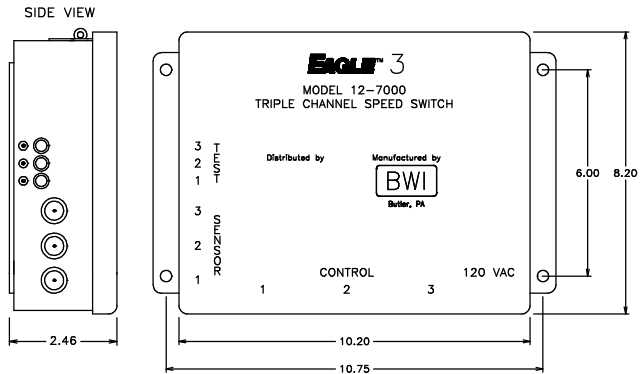
** Using the above calibration, the control relay will drop out at a machinery slow down of approximately 15%. For a 20% MARGIN, adjust the TRIP ADJUST control so that the OUT OF RANGE LED just comes on steady. For a 10% MARGIN, adjust the TRIP ADJUST control CCW so that the OUT OF RANGE LED has just gone out. If a margin **greater than 20%** is desired, consult BWI EAGLE, INC.



CONTROLS AND INDICATORS



DIMENSIONS



EAGLE 3

Triple Channel Critical Speed Switch

MODEL 12-7000

SPECIFICATIONS

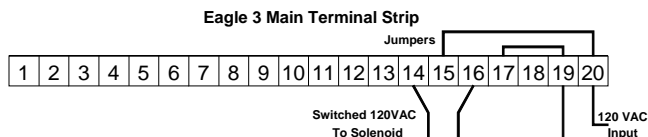
AC Input	120 VAC 15 W
Fuse Protected	1 amp
Operating Temperature	-40°C - +60°C (-40° - +140°F)
Speed Range	60 - 800 RPM
Relay Contacts	DP/DT 8 amp @ 120 VAC
On-Time Delay - Ch. 1	0 - 10 Seconds, Adjustable
On-Time Delay - Chs. 2 & 3	5 Seconds
Response Time	1 Second or Less
Housing	NEMA 12 Standard

REPLACEMENT AND OPTIONAL PARTS

P.C. Board	12-7002
Variable Reluctance Sensor	10-7003
Relay	99-REL-0001
Strain Relief (Power Input)	99-CON-0011
Strain Relief (Control)	99-CON-0012

DUST SUPPRESSION MODIFICATION PROCEDURE

1. Control cable #3 has been installed at the factory on terminals 14 and 15 for slip/sequence operation.
2. Move the wire on terminal 15 to terminal 16 and install jumpers (enclosed) as shown for Dust Suppression Valve use.
3. Valve must be 120VAC operation



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