



## Model 250 Rotary Speed Sensor Addendum (v2.32 and over) Change Operating Mode Instruction

Although it should never be necessary in normal operation, there is a provision for changing a number of optional operating modes that may be accessed during the calibrate procedure by repositioning various jumpers.

Mode 1 – Normal operation

Mode 2 – No missing head pulse detection

Mode 3 – Inverse operation of the relay

Mode 4 - 120 second startup delay

Mode 5 - 60 second startup delay

Mode 6 – No missing head pulse detection, inverse operation of the relay

(Note that these modes may be set at the factory on special order.)

Mode 1, normal operation, is the default factory setting. This setting provides for approximately 1 to 30 second startup delay time.

Mode 2, no missing head pulse detection, may be needed for applications that are unable to shut down power to the speed sensor board while the rotating equipment is stopped. This is an option that would typically be used on an elevator or similar application that has a motor running on an intermittent schedule.

Mode 3, inverse operation of the relay, may be used when "fail-safe" operation cannot be used

Mode 4, 120 second startup delay, provides a startup delay cycle of approximately 4 times the delay scale shown on the board. This would be used on equipment that requires a considerable length of time to get to normal operating speed.

Mode 5, 60 second startup delay, provides a startup delay cycle approximately 2 times the delay scale shown on the board.

Mode 6, no missing head pulse detection and inverse relay operation.

Changing the operating mode involves the steps below.

Note: Software prior to version 2.22 does not have the alternate operating modes enabled. Return board to factory for software update. The software version is stamped on the lower left corner of the board.

## **Change Mode jumper position table**

Mode	J3	J2 (Run/Test)	J4	J5 (Range	Speed Adjust	Delay Time
	(unmarked)		(Over/Under)	select)	Control	Control
1 - Normal	Jumper	Test	Under	Jumper 300-	Any Position	Any Position
operation				3600		
2 - No missing	Jumper	Test	Under	Jumper 60-	Any Position	Any Position
head detection				300		
3 - Inverse	Jumper	Test	Over	Jumper 60-	Any Position	Any Position
relay operation				300		
4 – 120 second	Jumper	Test	Over	Jumper 300-	Any Position	Any Position
startup delay	_			3600	-	-
5 – 60 second	Jumper	Test	Under	Jumper 15-60	Any Position	Any Position
startup delay	_			_	-	-
6 – No missing	Jumper	Test	Under	Jumper 15-60	Any Position	Any Position
head, inverse	_			and 300-3600	-	-

## Change operating mode instructions:

- 1. Disconnect AC power from board.
- 2. Set jumpers and controls as shown in above table. NOTE: Jumper for J3 is stored on the bottom of J1. Be sure to return it to the same position when recalibration is completed.
- 3. Apply power to board for 10-15 seconds.
- 4. Disconnect power.
- 5. Remove jumper from J3. Store it on the bottom two pins of J1 (closest to R2).
- 6. Install jumper on J2 Run position.
- 7. Install jumper on J4 for either overspeed or underspeed operation as required.
- 8. Install jumper on J5 for appropriate speed range, 15-60, 60-300, or 300-3600.
- 9. Rotate time delay control to desired startup delay time.
- 10. Power board and operating equipment, adjust speed adjust control per instructions in the operation manual.

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