

Encoder / Encoderless Switchover Configuration

The Encoder Switchover option is intended for applications that require a means of automatically switching from encoder to encoderless feedback without faulting the drive. This is accomplished by running the primary velocity regulator in encoderless mode and using the process trim as an outer speed trim loop. This option cannot be utilized if the application requires the use of Process Trim.

The Encoder / Encoderless switchover feature is enabled by selecting the “Encoder Trim” option (bit 7) in the **PTrim Sel** parameter (Pr 51). See Figure A below. When enabled, the encoder trim option will select the velocity ramp output for the **Ptrim Reference** (Pr 49), and the encoder velocity feedback signal for the **Ptrim Feedback** (Pr 50). The **Fdbk Device Type** (Pr 64) should be set to “Encoderless” bit 1 or “Encoderless w/Deadband” bit 4. See figure B. The process trim output will be automatically configured as a speed trim and the process trim regulator will be automatically enabled.

Upon loss of the encoder signal, the process trim output will enter a limit. This condition is detected by this module, and will result in setting of the “Enc TrimLoss” status (bit 7) in **Drive/Inv Sts 2** (Pr 196). The setting of this bit is conditioned by a time delay period of approximately 1.5 seconds that is an internal constant. When tripped, the speed trim output will be disabled, allowing the drive to run encoderless, without trim. This condition can be reset by toggling the “Encoder Trim” option bit in Pr 196 or resetting the drive.

Figure A:

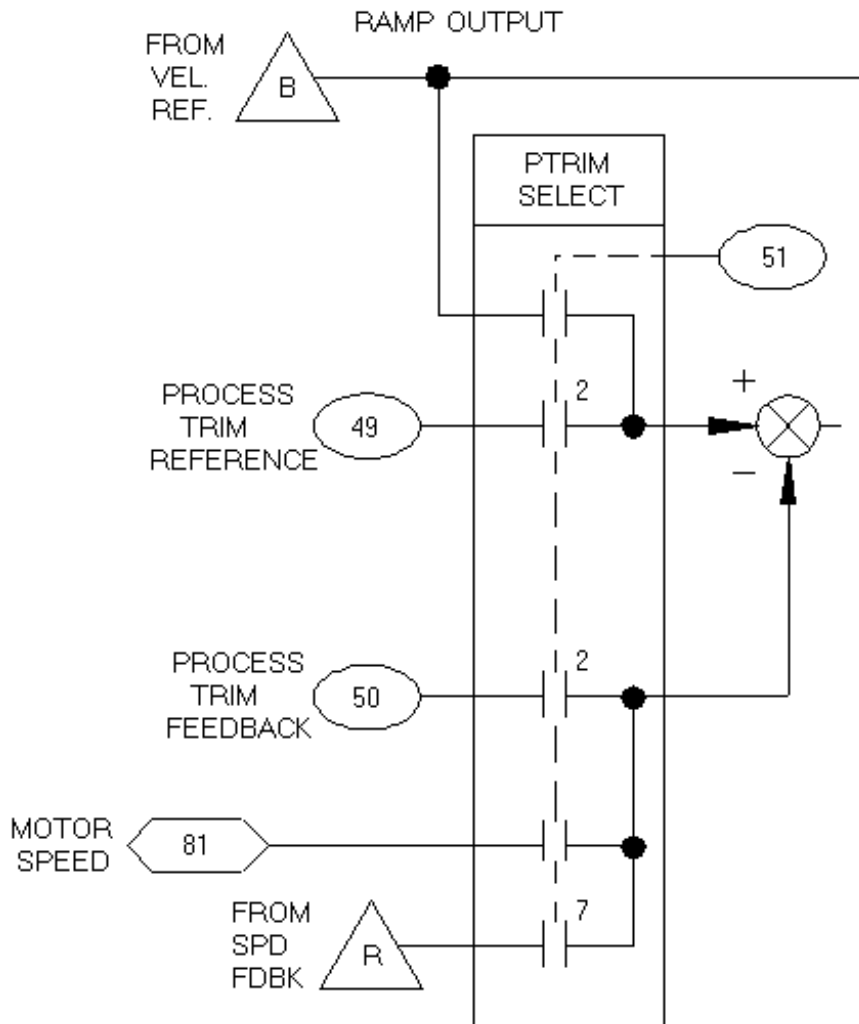


Figure B:

