

TB085 (Rev1) - Spindle Override Disabling

Overview

In software version 7.07, CPU7 PLC I/O assignments have been expanded to include a Spindle Knob Enable/Disable bit that is mapped to OUT80. This document describes the behavior and implementation of the spindle knob enable/disable function.

Defined behavior

OUT80 in a PLC program has been defined as a Spindle Knob Enable/Disable bit. A value of one will set the spindle speed to 100% of the commanded value. In Automatic spindle mode, setting OUT80 = 1 will cause the spindle speed to be that of the last S command in effect. In manual spindle mode, setting OUT80 = 1 will cause the spindle speed to be changed to approximately 50% of the difference between maximum and minimum spindle speeds. When OUT80 = 0, the spindle speed may be overridden by adjusting the spindle override knob.

Typical Implementations

Typical implementations modify the PLC program to toggle OUT80 via an AUX key, with a visual indication being mapped to the AUX LED output. All PLC programming required to implement the spindle override function is demonstrated below. Changes to the input, output, memory, and program sections of the example PLC program are using the AUX4 key as the toggle input. Note that MEM31 may already be used in an arbitrary PLC program and may require the use of a memory bit that has not been previously defined or used in the program section.

Changes in the input section of the PLC program:

Aux_4_key IS INP52 ; 1 = pressed

Changes in the output section of the PLC program:

Aux_4_LED IS OUT52 ; 1= on, 0 = off

SpinOverride IS OUT80 ; 1 = Override Disabled, 0 = Enabled

Changes in the memory section of the PLC program:

Last_aux_4 IS MEM31 ;

Changes in the program section of the PLC program:

Aux_4_LED = Aux_4_LED XOR (Aux_4_key AND / Last_aux_4)

SpinOverride = Aux_4_LED

Last_aux_4 = Aux_4_key

Document History

Rev1 Created on **2000-01-14**