

.*****INCREMENTAL TEST*****

This plc program will show you a way to utilize the incremental step with a remote pendant.

References in the book which will help you are Chapter 9.4 , 9.5 ; Select0,Select1,Select2,..

I25 ; PENDANT IS ON OR OFF

I26-I29 ; INCREMENTS BETWEEN 1,10,100,1000

I30-I33 ; SWITCH FOR AXIS

NOT I25=MOV 0 R503 =CNCWR(R503 ,KEYSRC,M1) ; when pendant is not enabled, enable the
; feedrate override switch and keyboard

;This is accomplished by moving 0 to R503 to enable the feedrate override switch. We write R503
;to Keysrc to enable the keyboard. R503 has the value of 0. CNCWR is the way to take the value
;in the register and transfer it to the variable.

I25 AND I26= MOV 1 R21= CNCWR(R21,KEYSRC,M1) =MOV \$FFFFFF7F R503; pendant is on

;and the switch for incremental distance .0001 is on , inhibit everything else

;You move 1 to register 21 and take the value in that register and transfer to the variable. This
;variable takes the value of 1 which means the plc takes control.

; Also, we are moving 1 to register 503 except bit 7. This bit will be zero. The bit enables JOG1
;of the feedrate override switch. In order to accomplish this, we move 1 to all the bits except 7:

; \$FFFFFF7F = 1111 1111 1111 1111 1111 0111 1111 in binary. The bits from left to right
; start with bit 31 to bit0

I25 AND I27= MOV 1 R21= CNCWR(R21,KEYSRC,M1) =MOV \$FFFFFFBF R503

; same for distance .001, bit 6 is 0

;\$FFFFFFBF = 1111 1111 1111 1111 1111 1011 1111 in binary.

;1011 is 11 and in hex, the value is B

I25 AND I28= MOV 1 R21= CNCWR(R21,KEYSRC,M1) =MOV \$FFFFFFDF R503 ; same

I25 AND I29= MOV 1 R21= CNCWR(R21,KEYSRC,M1) =MOV \$FFFFFFEF R503 ; same

()=MOV SELECT0 R20 008 ; check Selector0-4 in R20

; we will check to see if the right selection is taken when we switch the selector. We are checking

; 5 bits only: this is according to the chart under SELECT0-4 in section 9.5

; we are checking from M5531-M5524 because 8 bits selected bit765...0

=AND \$07 R20 R20 ; mask the register for 8 bits

; For example, if the selector reads 00111 which means we chose JOG1, we then mask the rest of
;the bits because we do not care about the other bits 000111 AND \$1F will take care of this.

; 000111

; AND 00000111 in binary which is \$1F in hex. The result confirms the
; selection

I25 AND (CPS R20 LE 7 AND CPS R20 GE 3)=M300 ; check to see if the selector is between 7 and 3

; We obtain these values through the SELECT4-SELECT0 chart. If the chart reads 00111, we are
;confirming the selection for JOG1, the value of 7 would be confirmed

M300 AND I30=AXIS+1

; if it is and x axis is selected , move the axis

M300 AND I31=AXIS-1

M300 AND I32=AXIS+2

M300 AND I33=AXIS-2

END