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\*\*\*\*\* Part Width Sorter Control with Parallel Branches \*\*\*\*\*

Additional internal memory:

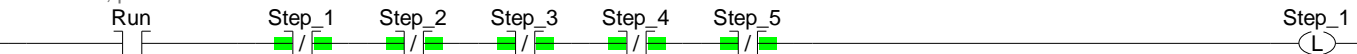
Tag	Data Type	
Int_Reset	BOOL	Internal reset
Step_1 to Step_5	BOOL	Step-in-progress bits
B1_Tmr	TIMER	Times eject pulse for bin 1
B2_Tmr	TIMER	Times eject pulse for bin 2
B3_Tmr	TIMER	Times eject pulse for bin 3
Bin1	BOOL	Size for bin 1
Bin2	BOOL	Size for bin 2
Bin3	BOOL	Size for bin 3
UX1_Inch	REAL	UX1 reading in inches
UX2_Inch	REAL	UX2 reading in inches
UX3_Inch	REAL	UX3 reading in inches
Part_Width	REAL	Part width in inches

Conversion formulas

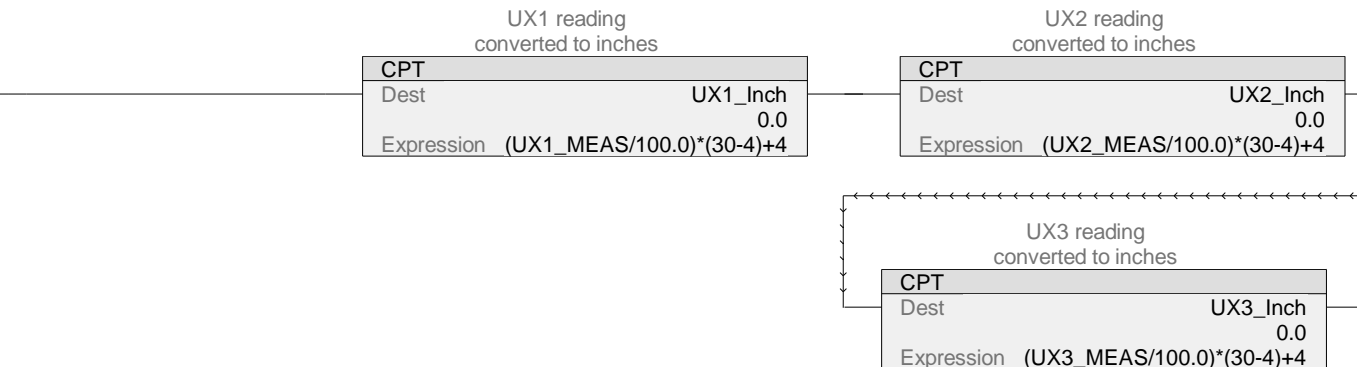
$$UXn\_INCH = (UXn\_MEAS/100) * (30-4) + 4$$

Initial start

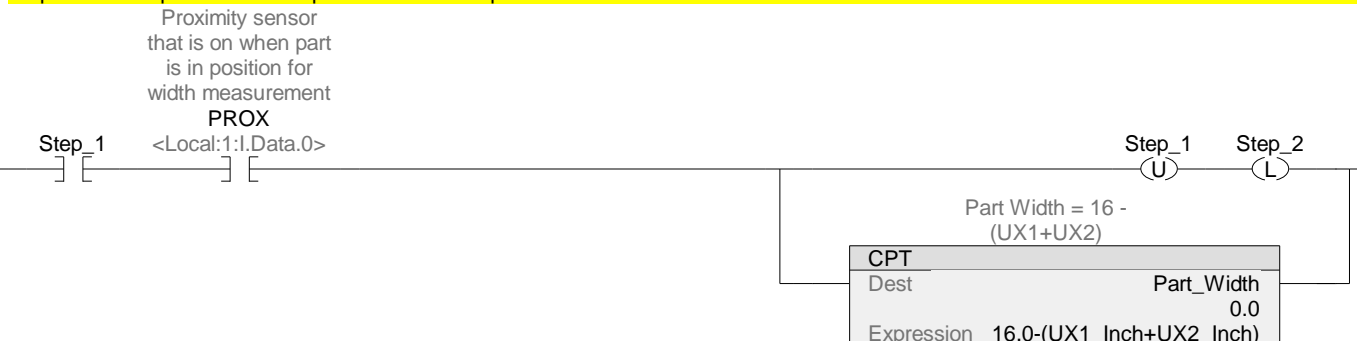
When on, allow  
station to run. When  
off, pause.



Convert UX readings to inches.



Step 1. Wait for part in measure position. Calculate part width on transition.



Determine size ranges for sorting.

Part Width = 16 -  
(UX1+UX2)

LIM	
Low Limit	0.9
Test	Part_Width
	0.0
High Limit	1.1

Part width 1"  
Bin1

Part Width = 16 -  
(UX1+UX2)

LIM	
Low Limit	1.9
Test	Part_Width
	0.0
High Limit	2.1

Part width 2"  
Bin2

Part width 1" Bin1  
Part width 2" Bin2

All other sizes  
Bin3

Step 2. Wait for part in ejection position.

Step\_2

UX3 reading converted to inches LEQ	
Source A	UX3_Inch
	0.0
Source B	24.0

Part width 1"  
Bin1

Step\_2

Step\_3

UX3 reading converted to inches LEQ	
Source A	UX3_Inch
	0.0
Source B	16.0

Part width 2"  
Bin2

Step\_2

Step\_4

UX3 reading converted to inches LEQ	
Source A	UX3_Inch
	0.0
Source B	8.0

All other sizes  
Bin3

Step\_2

Step\_5

Step 3. Eject part into bin 1.

Time eject into bin  
1

Time eject into bin  
1

Step\_3

TON	
Timer	B1_Tmr
Preset	1000
Accum	0

(EN)

(DN)

B1\_Tmr.DN

Step\_3

Step\_1

