

Main_Program [OB1]

Main_Program Properties

General

Name	Main_Program	Number	1	Type	OB
Language	LAD	Numbering	Manual		

Information

Title	"Main Program Sweep (Cycle)"	Author		Comment	
Family		Version	0.1	User-defined ID	

Name	Data type	Default value
▼ Temp		
OB1_EV_CLASS	Byte	
OB1_SCAN_1	Byte	
OB1_PRIORITY	Byte	
OB1_OB_NUMBR	Byte	
OB1_RESERVED_1	Byte	
OB1_RESERVED_2	Byte	
OB1_PREV_CYCLE	Int	
OB1_MIN_CYCLE	Int	
OB1_MAX_CYCLE	Int	
OB1_DATE_TIME	Date_And_Time	
Constant		

Network 1: SP7-15

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SP7-15 Part Width Sorter Control with Parallel Branches

Additional internal memory:

Tag Address

Step_1 to Step_5 M0.1 to M0.5 BOOL Step-in-progress bits

Bin1_Tmr DB3 TON_SFB Times eject pulse for bin 1

Bin2_Tmr DB4 TON_SFB Times eject pulse for bin 2

Bin3_Tmr DB5 TON_SFB Times eject pulse for bin 3

Bin1 M20.0 BOOL Width in range of 0.9 - 1.1

Bin2 M20.1 BOOL Width in range of 1.9 - 2.1

Bin3 M20.3 BOOL Width in range not one of above

UX1_Inch MD80 REAL UX1 reading in inches

UX2_Inch MD84 REAL UX2 reading in inches

UX3_Inch MD88 REAL UX3 reading in inches

Part_Width MD92 REAL Part width in inches

TmpDI MD120 DINT Temporary double integer

TmpR MD124 REAL Temporary real

Ret_Val MW12 WORD Return value from SCALE block

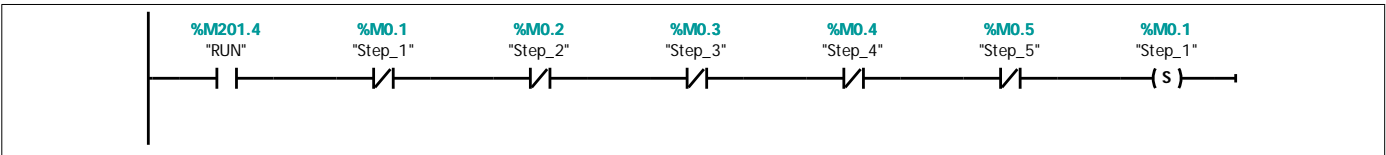
Always_Off M10.0 BOOL Always off bit for SCALE block

Conversion formulas:
 $UXn_INCH = (UXn_MEAS - 5530) / 22118.0 * (30.0 - 4.0) + 4.0$

Part_Width = 16 - (UX1+UX2)

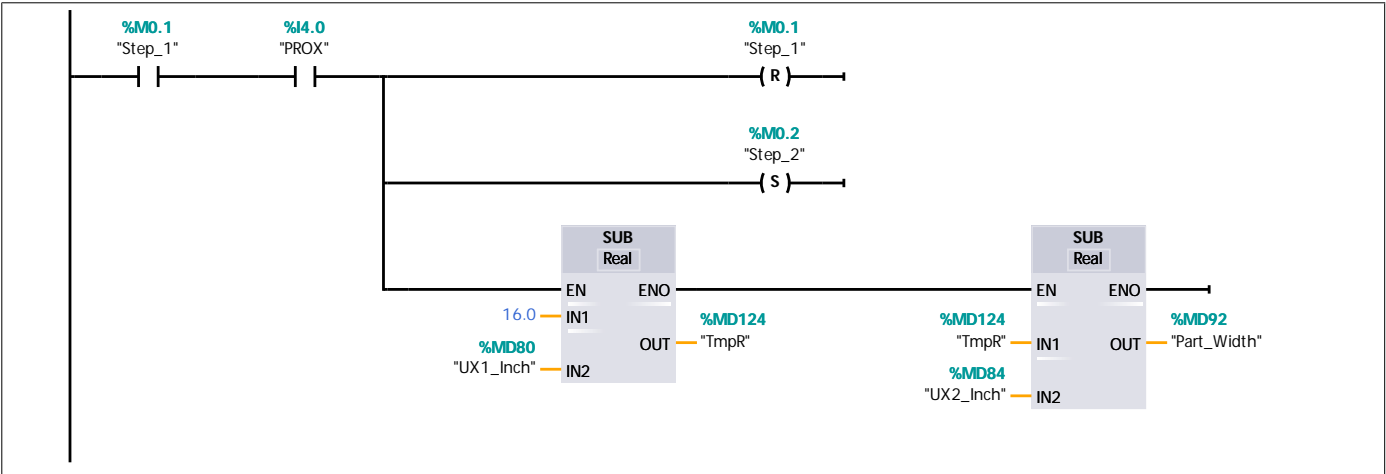


Network 2: Initial Start

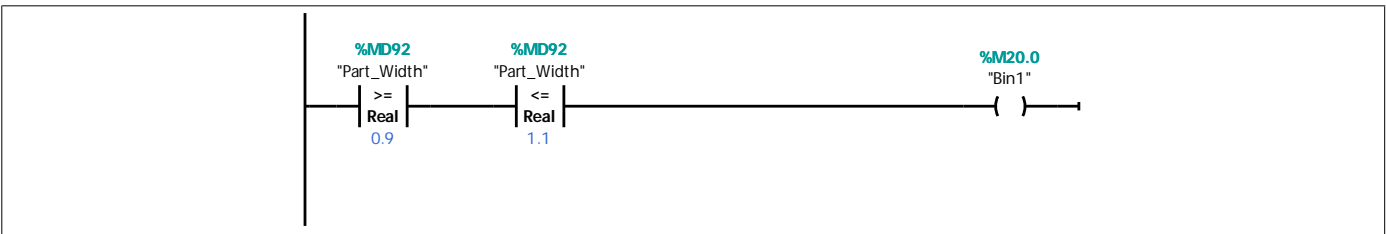


Network 3: Step 1 Wait for part in measure position

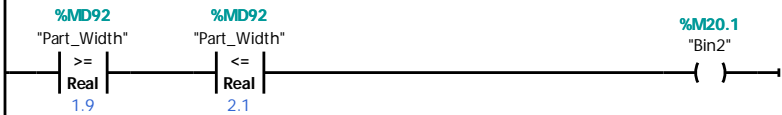
Calculate part width on transition



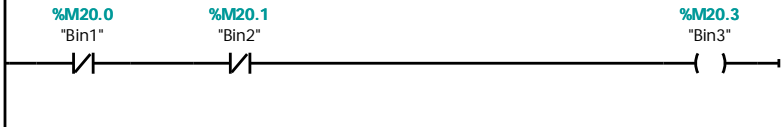
Network 4: Size range for 1" part



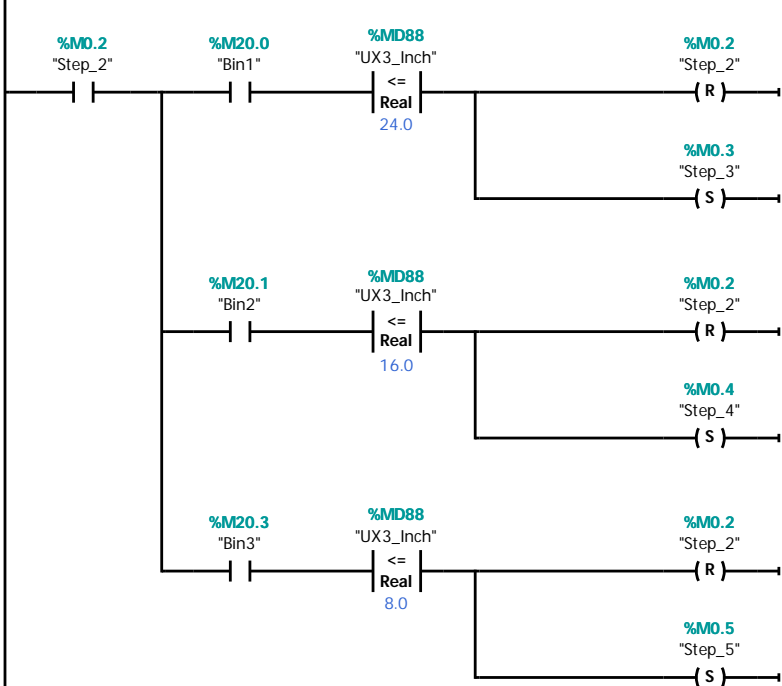
Network 5: Size range for 2" part



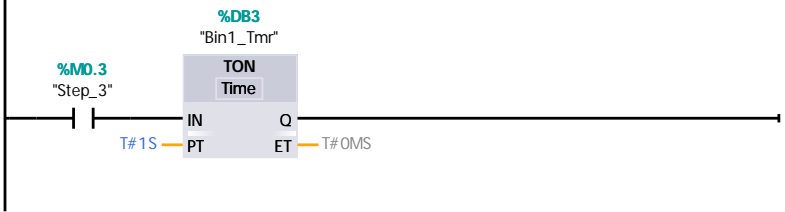
Network 6: Width not in one of above ranges



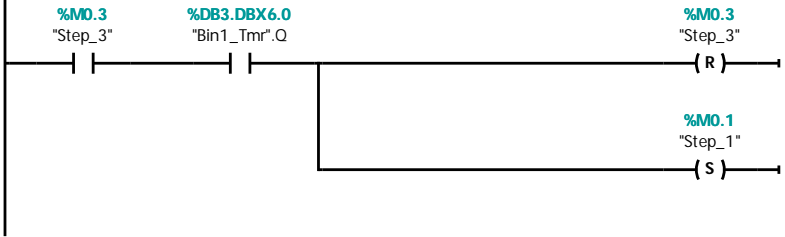
Network 7: Step 2 - Wait for part in ejection position



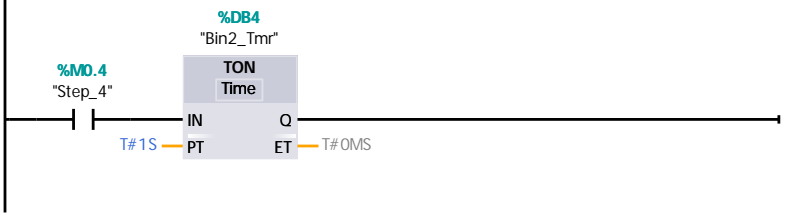
Network 8: Step 3 timer



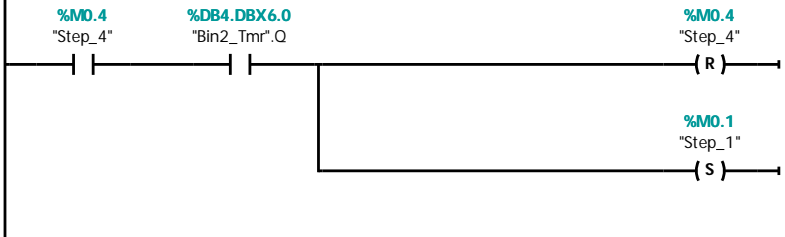
Network 9: Step 3 Eject part into bin 1



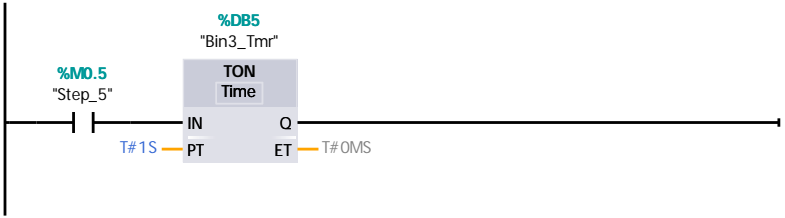
Network 10: Step 4 timer



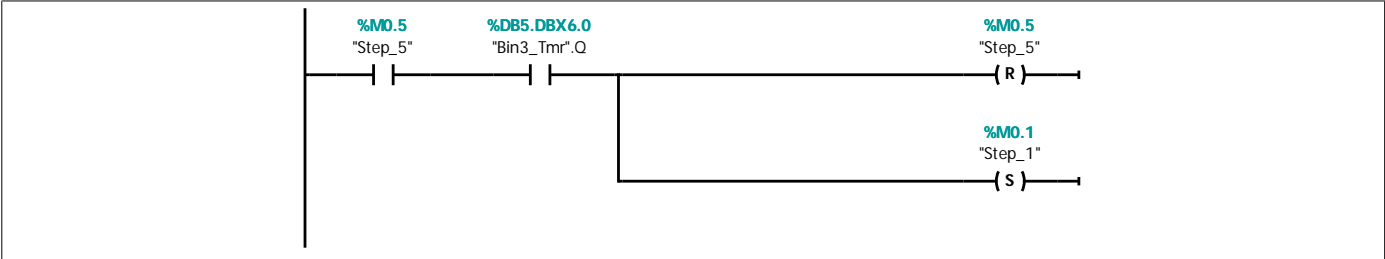
Network 11: Step 4 Eject part into bin 2



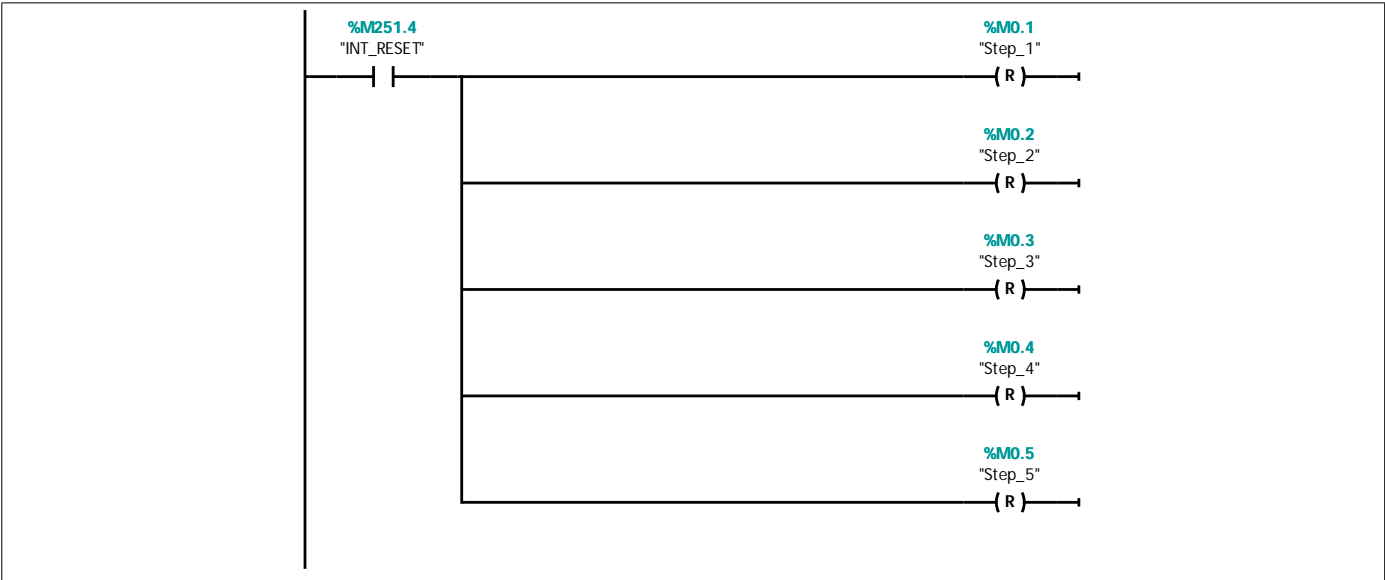
Network 12: Step 5 timer



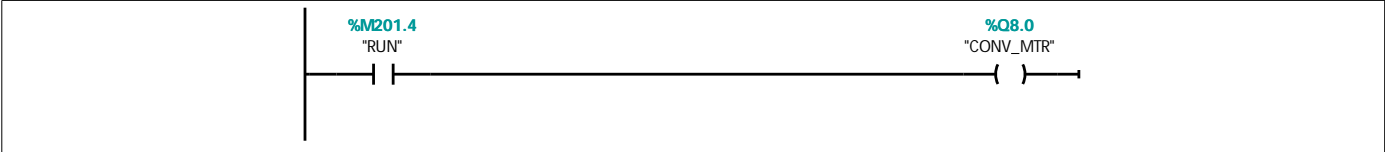
Network 13: Step 5 Eject part into bin 3



Network 14: Reset



Network 15: Conveyor



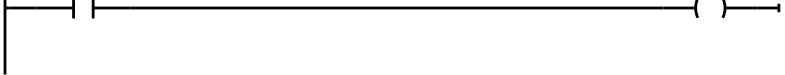
Network 16: Eject 1



Network 17: Eject 2

%M0.4
"Step_4"

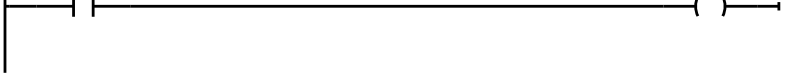
%Q8.2
"EJECT2"



Network 18: Eject 3

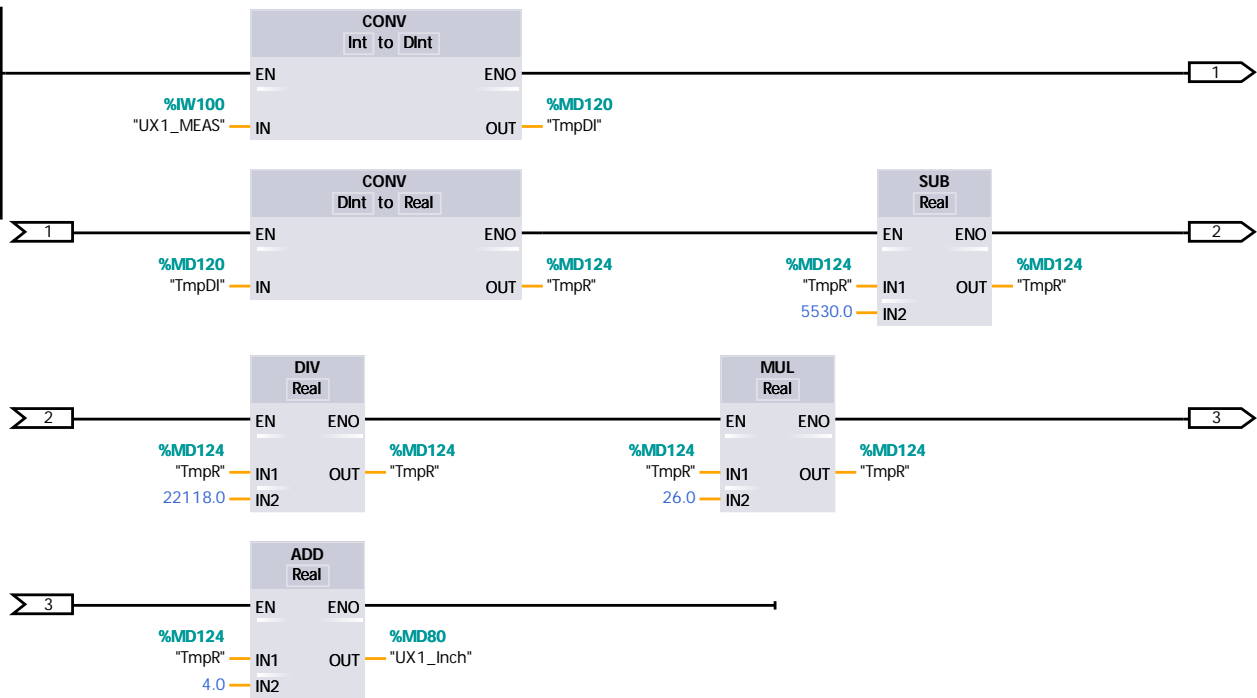
%M0.5
"Step_5"

%Q8.3
"EJECT3"



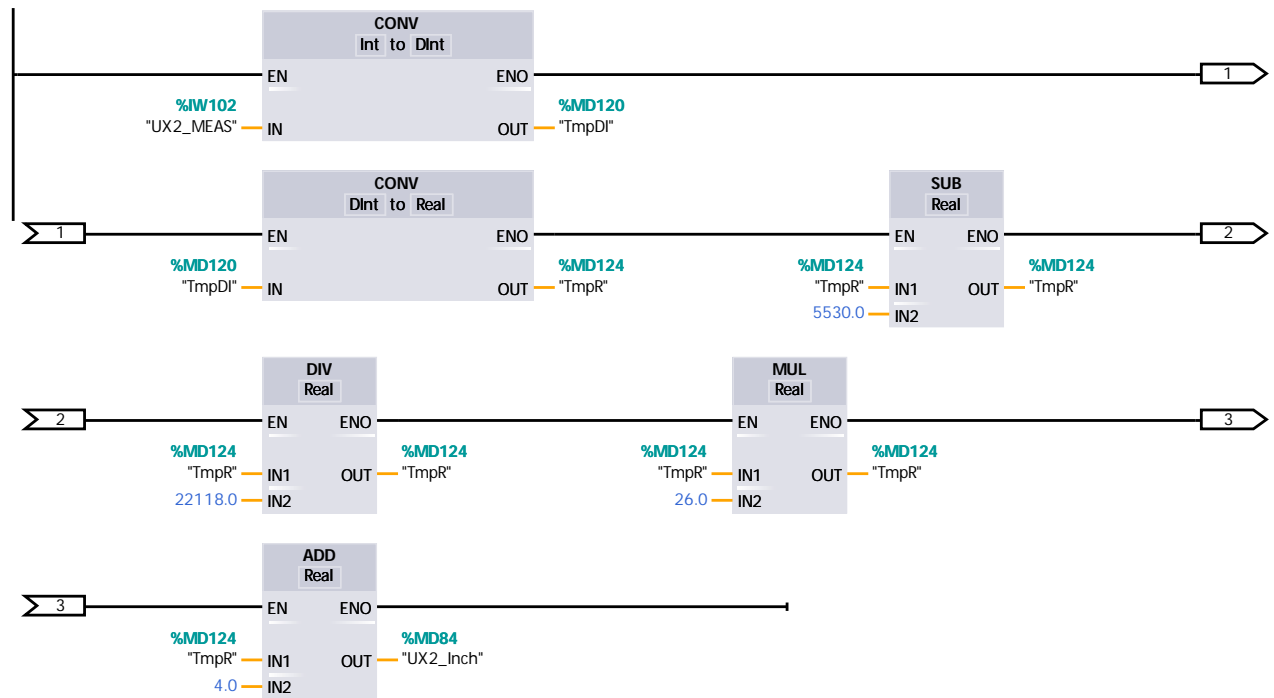
Network 19: Convert UX1 measurements with comp blocks

Convert UX1 measurement to inches.
Uses individual computation blocks.



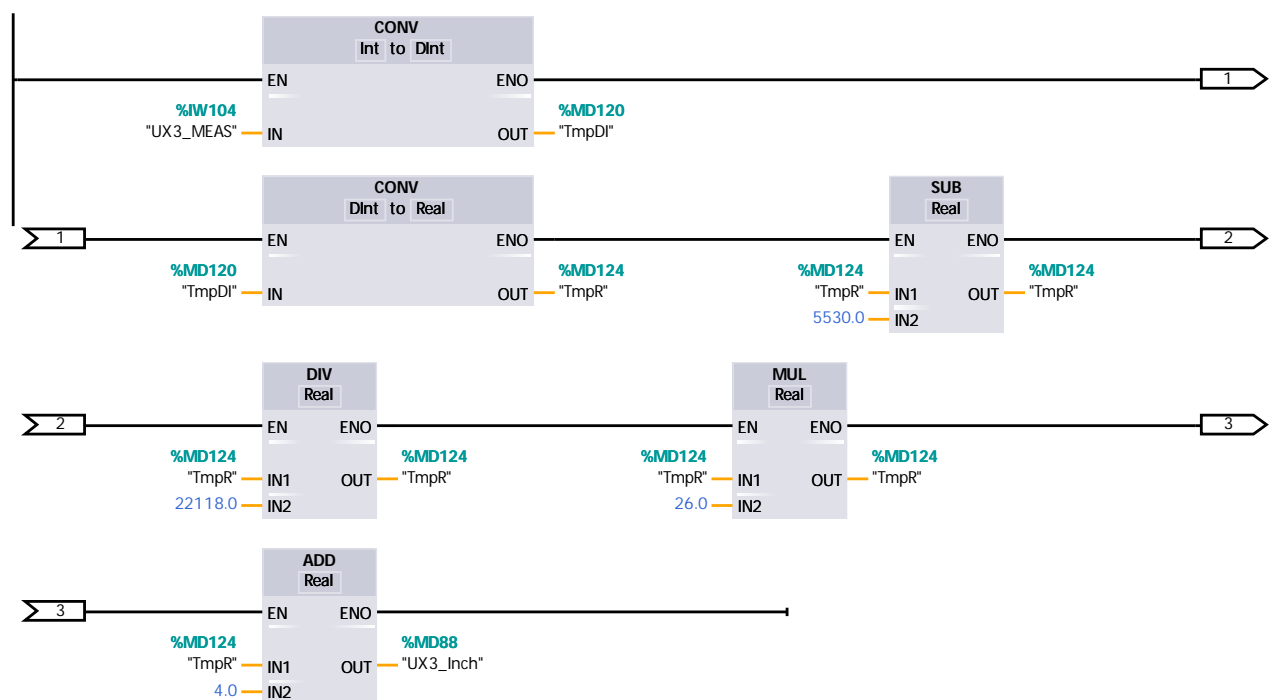
Network 20:

Convert UX2 measurement to inches.
Uses individual computation blocks.

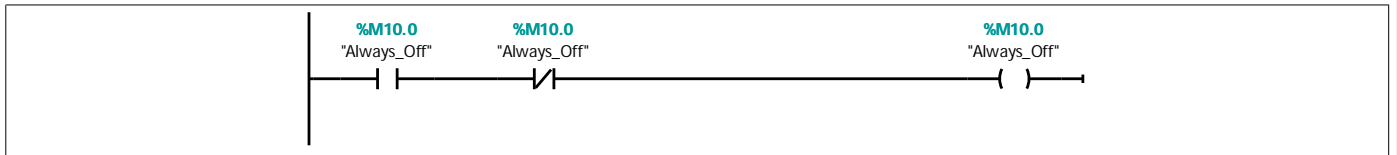


Network 21:

Convert UX3 measurement to inches.
Uses individual computation blocks.



Network 22: Always Off



Network 23: Convert UX measurements with SCALE

Convert UX measurements.

Uses SCALE block. Note that the lo_lim input is 25% lower than zero weight to account for this block assuming the minimum value of the analog in is zero rather than the 5530 (which corresponds to 4 mA).

