

# Main [OB1]

## Main Properties

### General

Name	Main	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: SP7-3

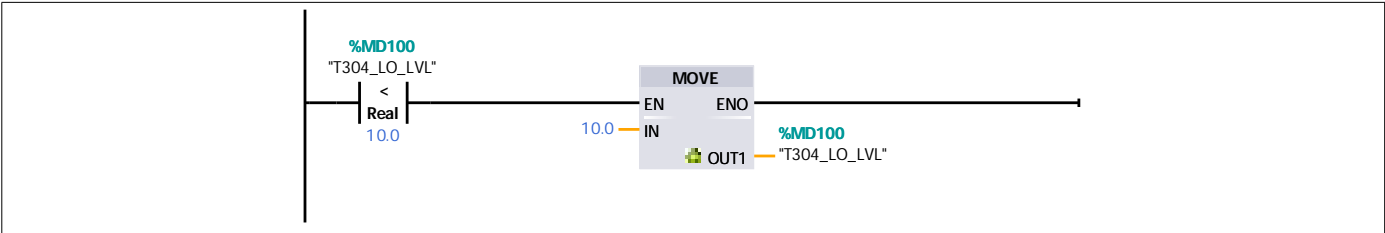
Copyright (c) 2011-2023 Dogwood Valley Press, LLC

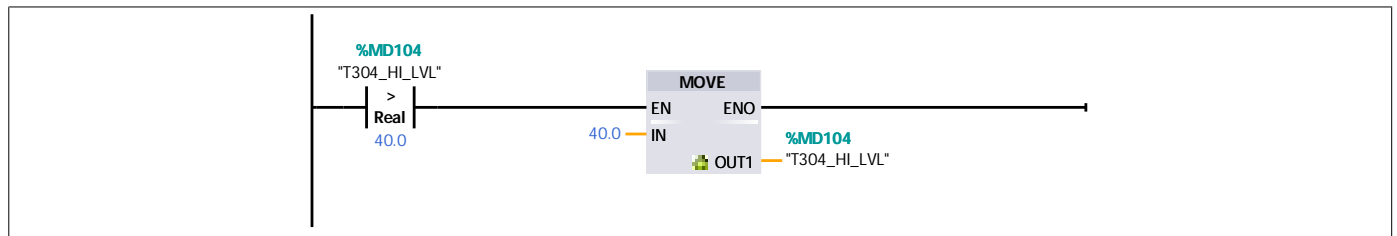
Problem SP7-3 Day Tank Level Control with Alarms

This part from SP7-2

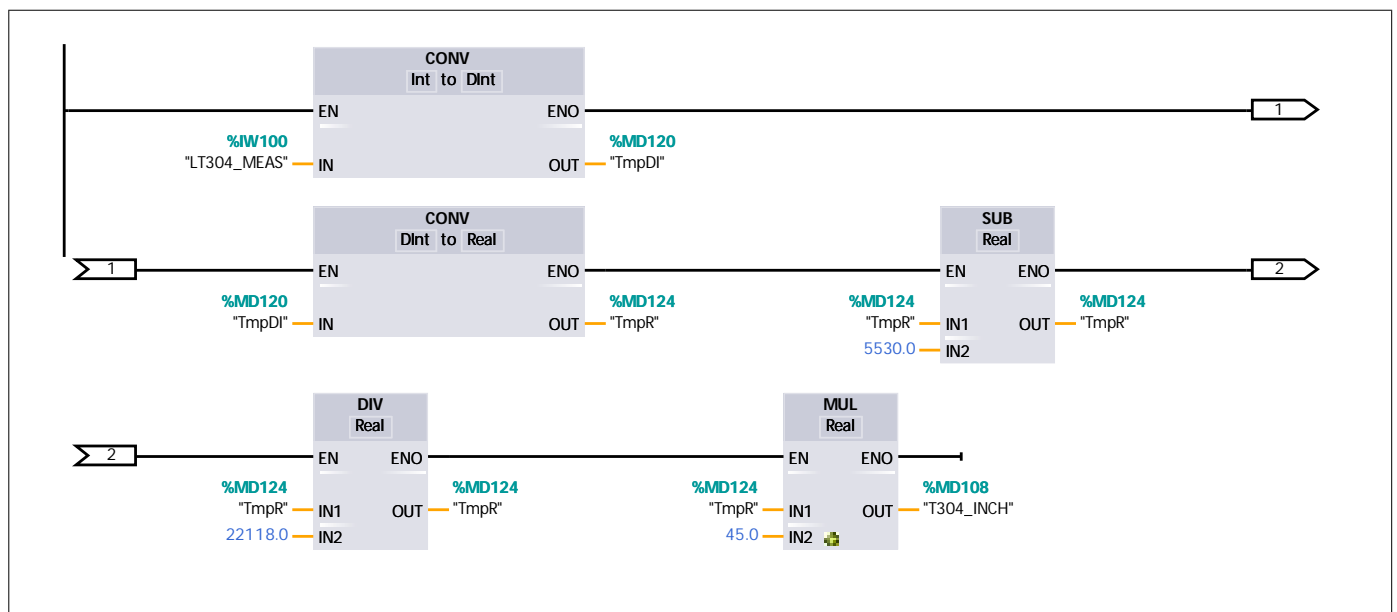


## Network 2: Make sure minimum tank level within bounds.

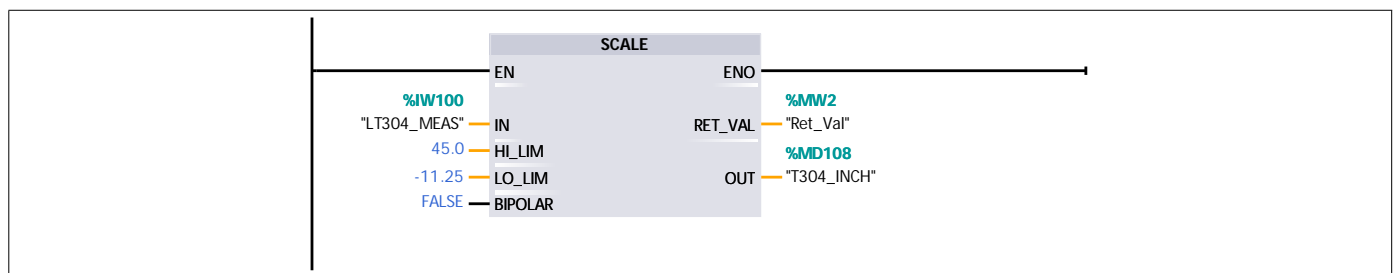


**Network 3: Make sure maximum tank level within bounds.****Network 4: Convert level measurement with comp blocks**

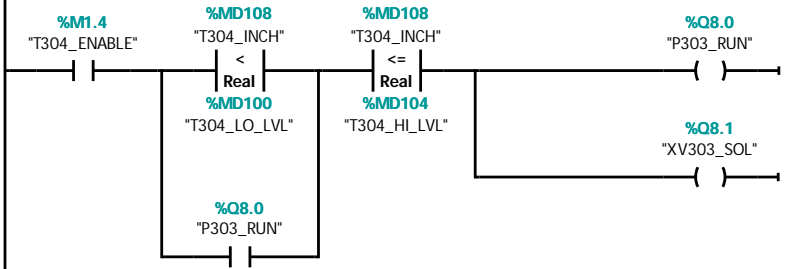
Convert level measurement to level in inches.  
Uses individual computation blocks.

**Network 5: Convert level measurement with SCALE**

Convert level measurement to level in inches.  
Uses SCALE block. Note that the lo\_lim input is 25% lower than zero level to account for this block assuming the minimum value of the analog in is zero rather than the 5530 (which corresponds to 4 mA).

**Network 6: Tank pump control**

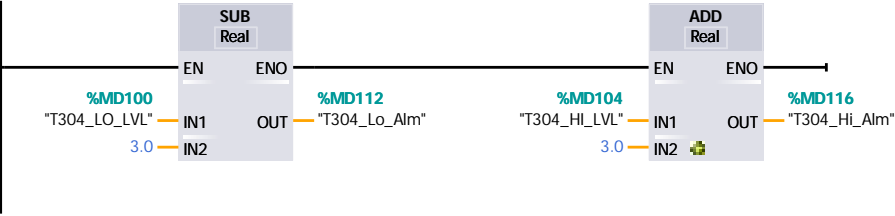
Tank control - on when level low, off when level high.



**Network 7: \*\*\*\*\* Section for SP7-3 \*\*\*\*\***

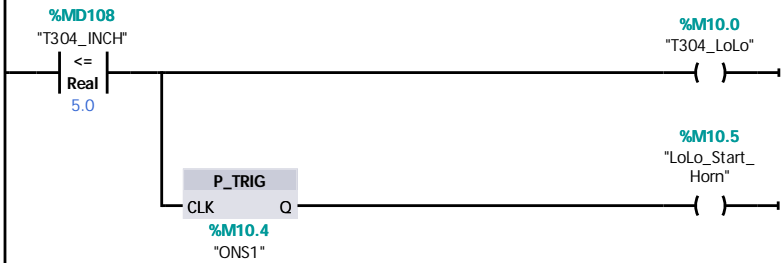
Additional internal memory:  
Tag Address  
T304\_Lo\_Alm %MD112 REAL Low alarm value  
T304\_Hi\_Alm %MD116 REAL High alarm value  
T304\_LoLo %M10.0 BOOL On when low-low alarm  
T304\_Lo %M10.1 BOOL On when low alarm  
T304\_HiHi %M10.2 BOOL On when high-high alarm  
T304\_Hi %M10.3 BOOL On when high alarm  
ONS1 %M10.4 BOOL Transitional bit for low-low  
LoLo\_Start\_Horn %M10.5 BOOL Horn start for low-low  
ONS2 %M10.6 BOOL Transitional bit for high-high  
HiHi\_Start\_Horn %M10.7 BOOL Horn start for high-high  
Flash\_Tmr1 %DB1 IEC\_TIMER First tmr for low-low and hi-hi flash light  
Flash\_Tmr2 %DB2 IEC\_TIMER Secnd tmr for low-low and hi-hi flash light

Calculate alarm level values

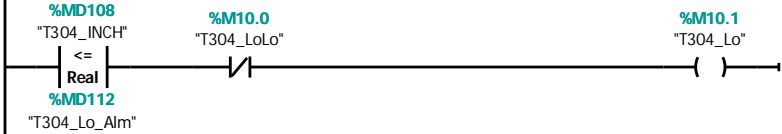


**Network 8: Low-low alarm detection**

Low-low alarm detection and transition to start horn.



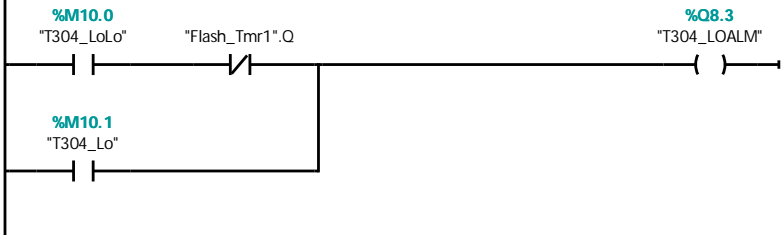
Network 9: Low alarm detection



Network 10: Flashing light timers for low-low and hi-hi

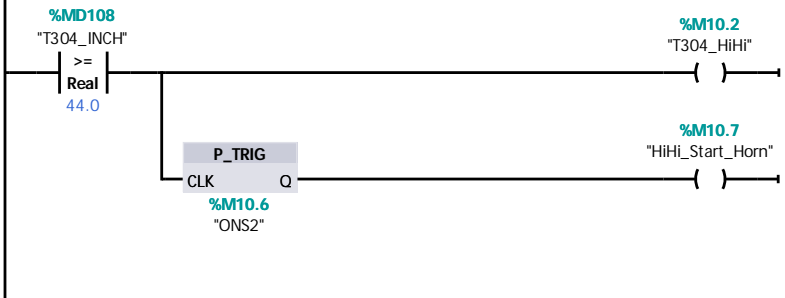


Network 11: Low and low-low alarm indication



Network 12: High-high alarm

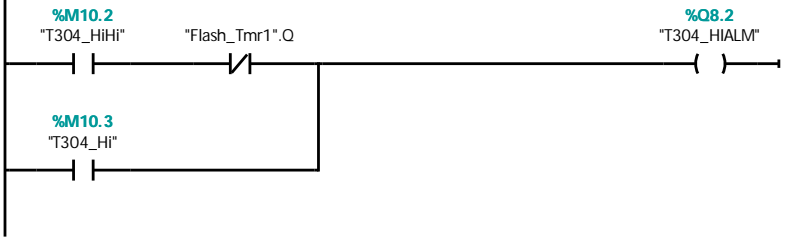
High-high alarm detection and transition to start horn.



Network 13: High alarm detection.



Network 14: High and high-high indication



Network 15: Alarm horn

Low-low and high-high transitions turn it on

