

Totally Integrated Automation Portal

Main [OB1]

Main Properties

General

| | | | | | |
|----------|------|-----------|--------|------|----|
| Name | Main | Number | 1 | Type | OB |
| Language | LAD | Numbering | Manual | | |

Information

| | | | | | |
|--------|--------|---------|-----|-----------------|--|
| Title | SP7-14 | 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: SP7-14

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SP7-14 Multi-Tank Batch Control

Additional internal memory:
Tag Address
Run %M5.0 BOOL On while batch running
Step_1 to Step_22 %M0.1 to M2.7 BOOL Step-in-progress bits
Delay_Tmr %DB1 IEC_TIMER Delay after emptying half of tanks
Reaction_Tmr %DB2 IEC_TIMER Times reaction
TmpDI %MD120 DINT Temporary double integer
TmpR %MD124 REAL Temporary real
Ret_Val %MW12 WORD Return value from SCALE block

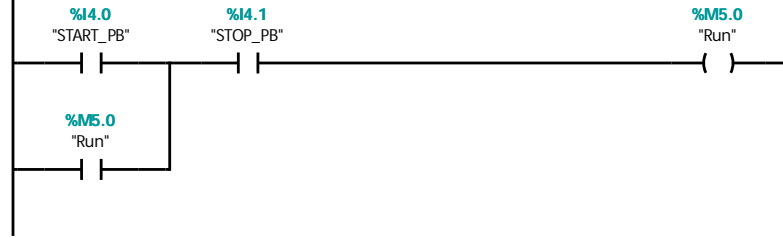
%M3.0

"Dummy"

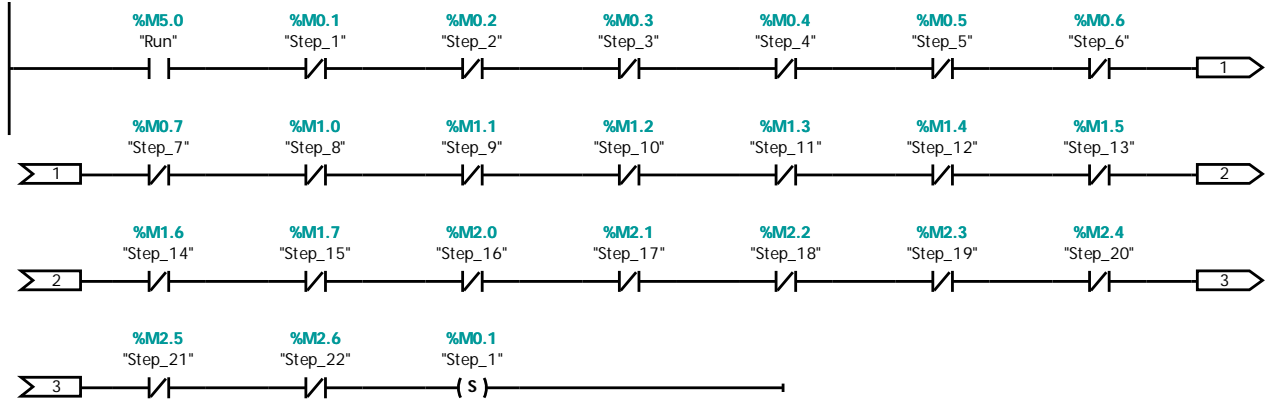
%M3.0

"Dummy"

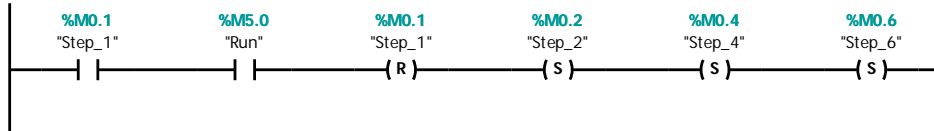
Network 2: Start/Stop



Network 3: Initial Start

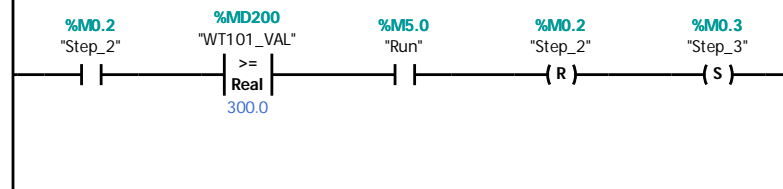


Network 4: Step 1 Make sure run is on (especially after a pause)



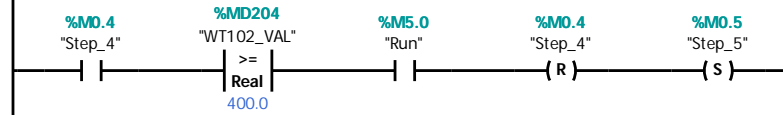
Network 5: Step 2. Fill Tank 1

Transition to wait when full



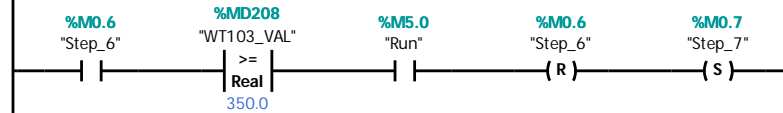
Network 6: Step 4. Fill Tank 2

Transition to wait when full



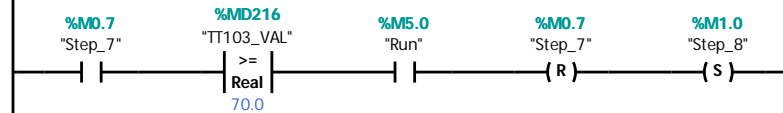
Network 7: Step 6. Fill Tank 3

Transition to heating when full

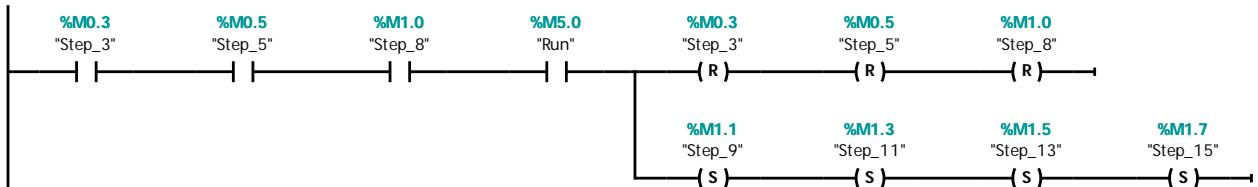


Network 8: Step 7. Heat tank 3

Transition to wait when temperature >= 70

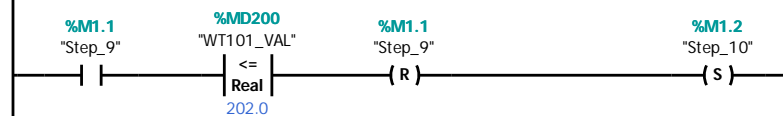


Network 9: Steps 3, 5, 8 - Wait until all tanks full and 3 heated



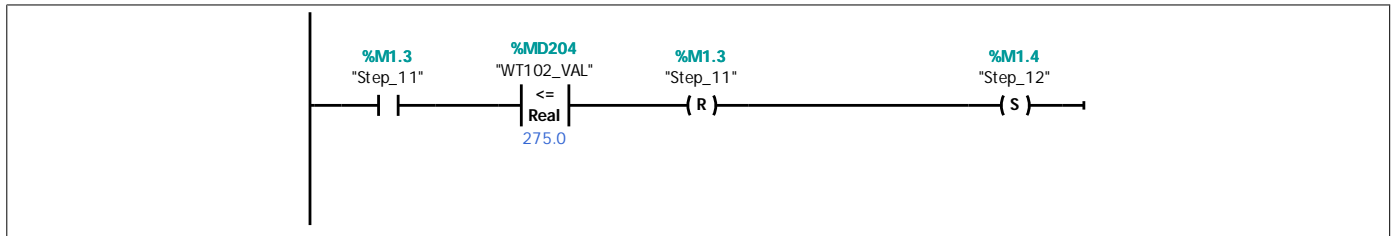
Network 10: Step 9. Empty Tank 1

Transition to hold when material moved out.



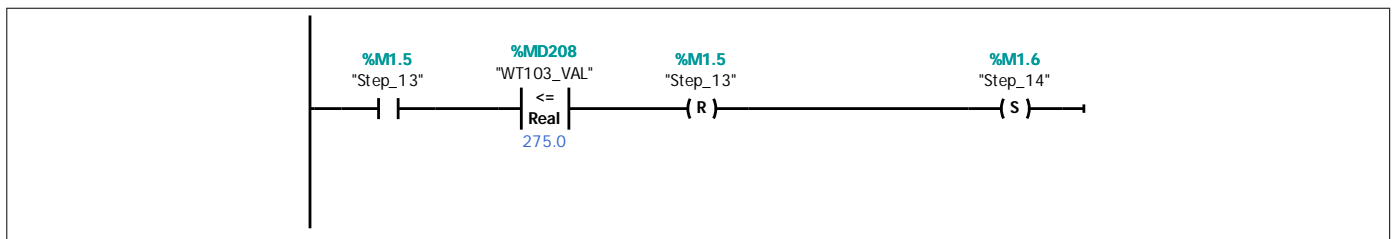
Network 11: Step 11. Empty half of material in Tank 2.

Transition to hold when material moved out.



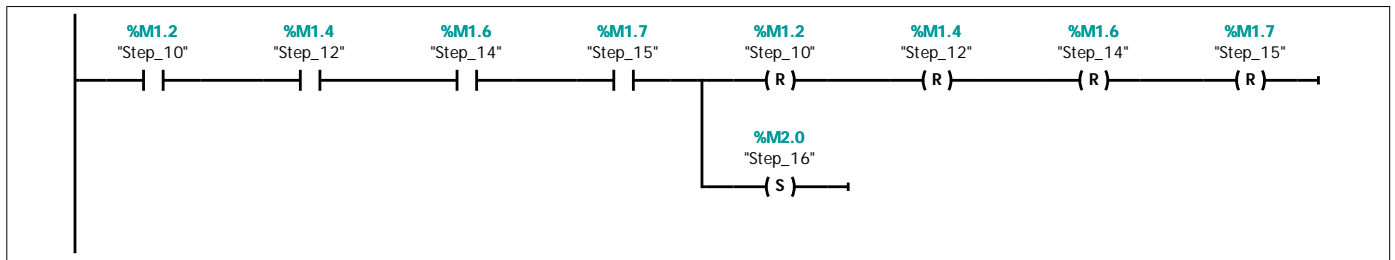
Network 12: Step 13. Empty half of material in Tank 3.

Transition to hold when material moved out.

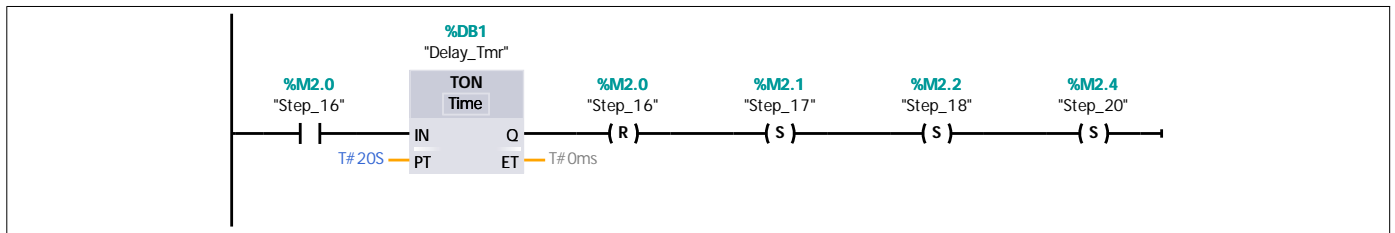


Network 13: Steps 10, 12, 14, 15.

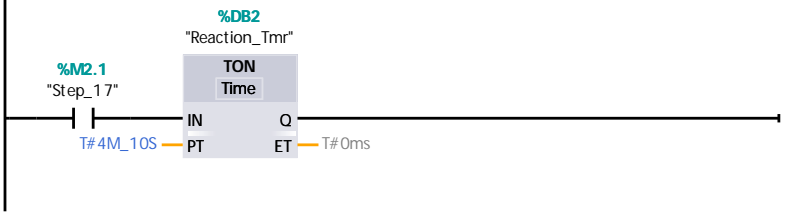
Stor while waiting (Step 15) until all tanks have unloaded appropriate amount of material.



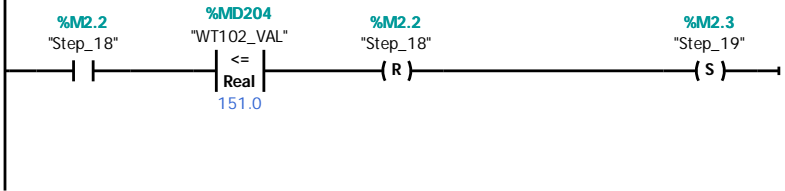
Network 14: Step 16. Wait for 20 seconds



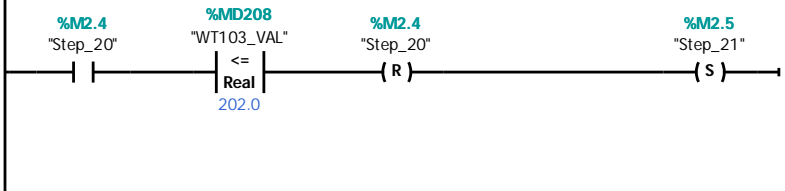
Network 15: Step 17 - 250 sec reaction time



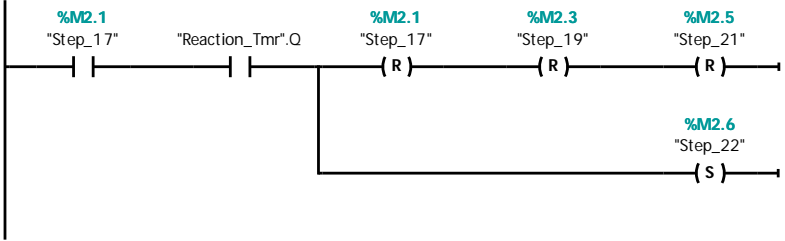
Network 16: Step 18 - Empty remainder of material in Tank 2



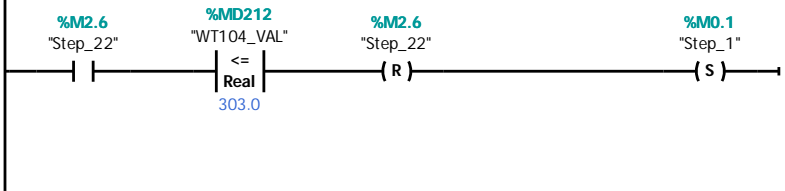
Network 17: Step 20. Empty remainder of material in Tank 3



Network 18: Step 17, 19, 21. Wait for 250 sec timer to be done



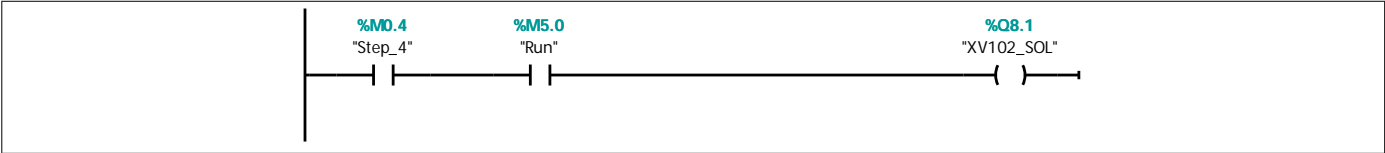
Network 19: Step 22. Empty Tank 4



Network 20: Valves



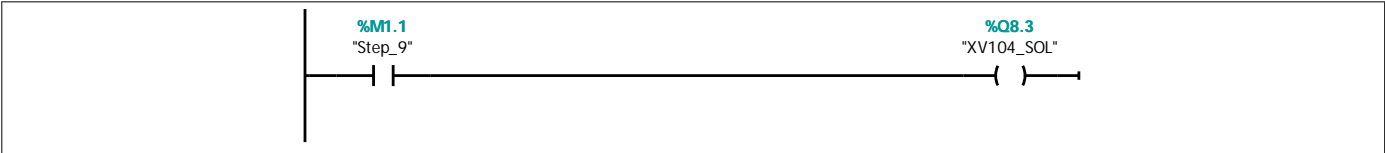
Network 21: On to open XV102



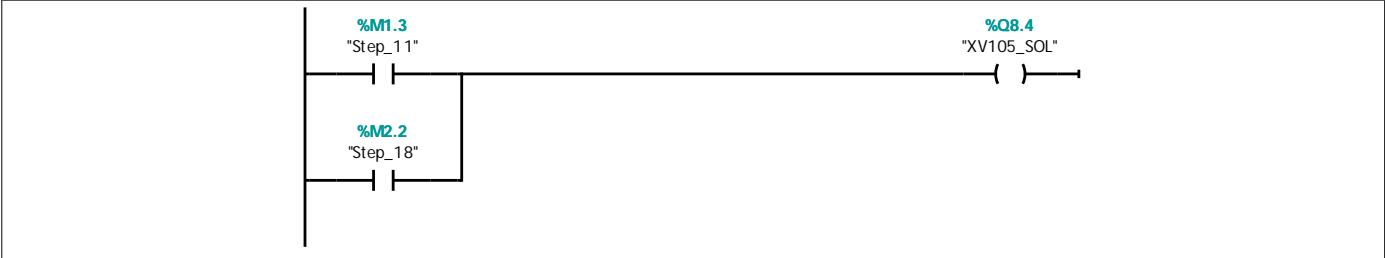
Network 22: XV103 control



Network 23: XV104 control



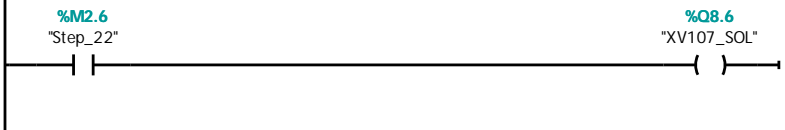
Network 24: On to open XV105



Network 25: On to open XV106



Network 26: On to open XV107



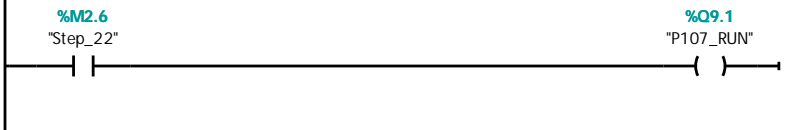
Network 27: Pumps



Network 28: On to run pump P-106



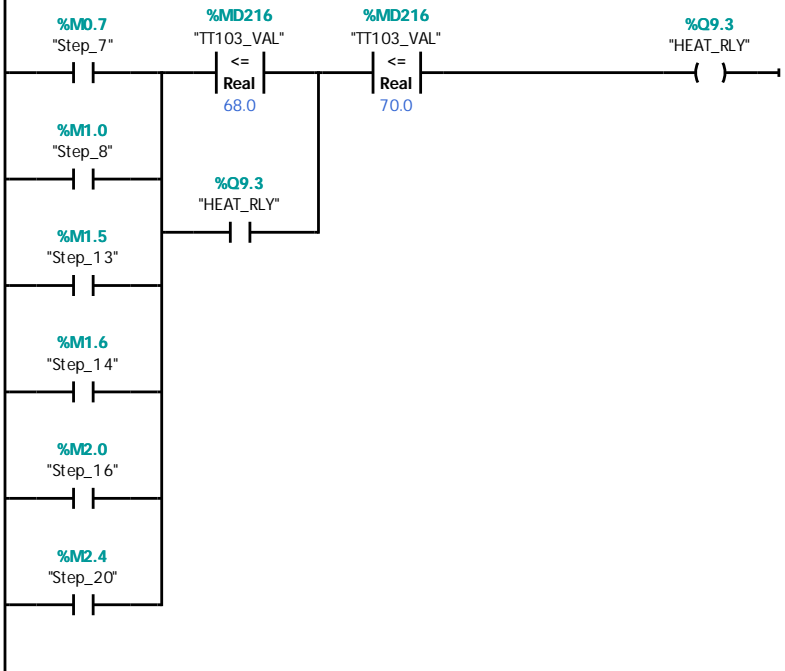
Network 29: On to run pump P-107



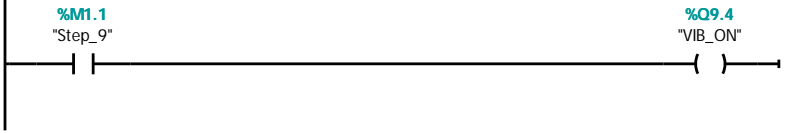
Network 30: Stirrer



Network 31: Heater



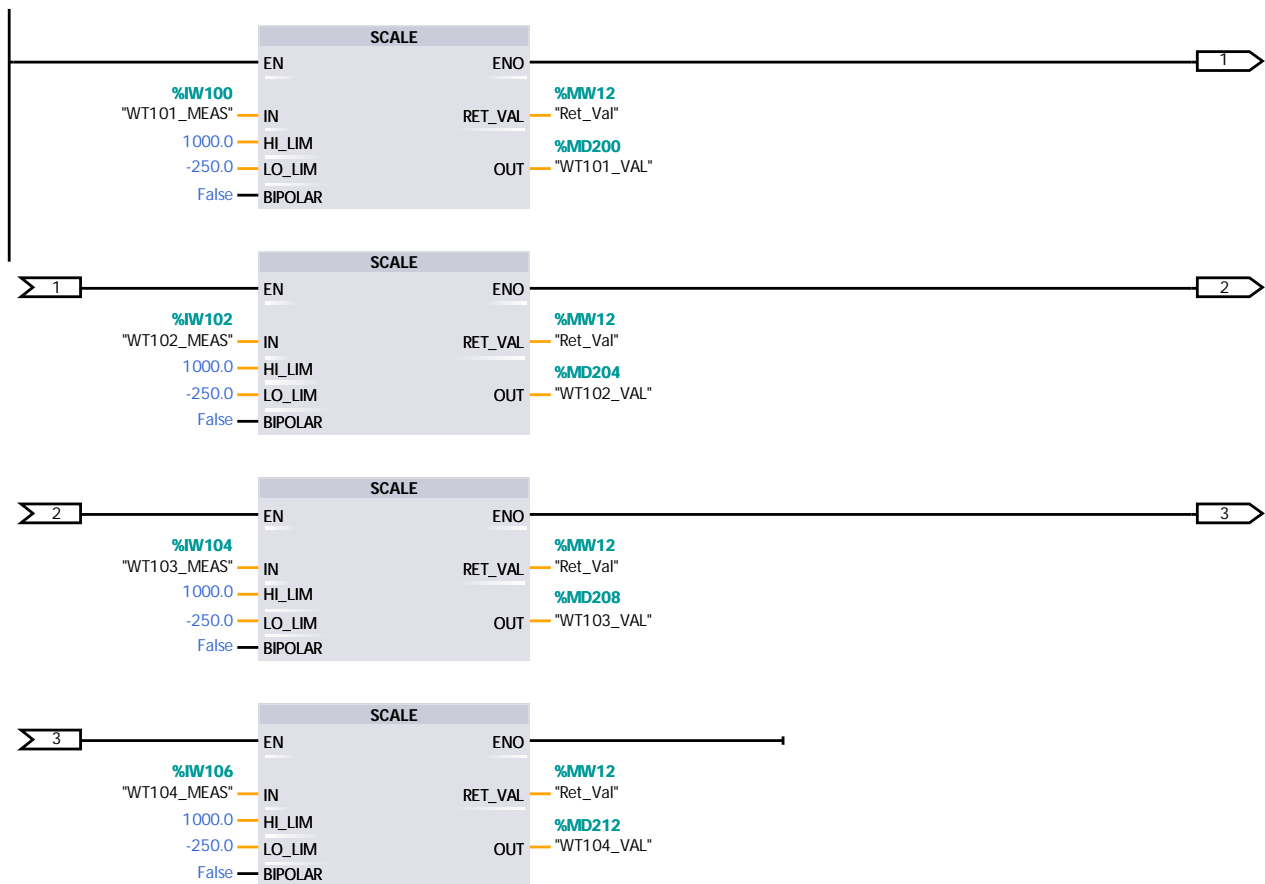
Network 32: Vibrator



Network 33: Convert weight measurements with SCALE

Convert weight measurements to pounds.
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).



Network 34: Convert temperature measurement with SCALE

Convert temperature measurement.

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).

