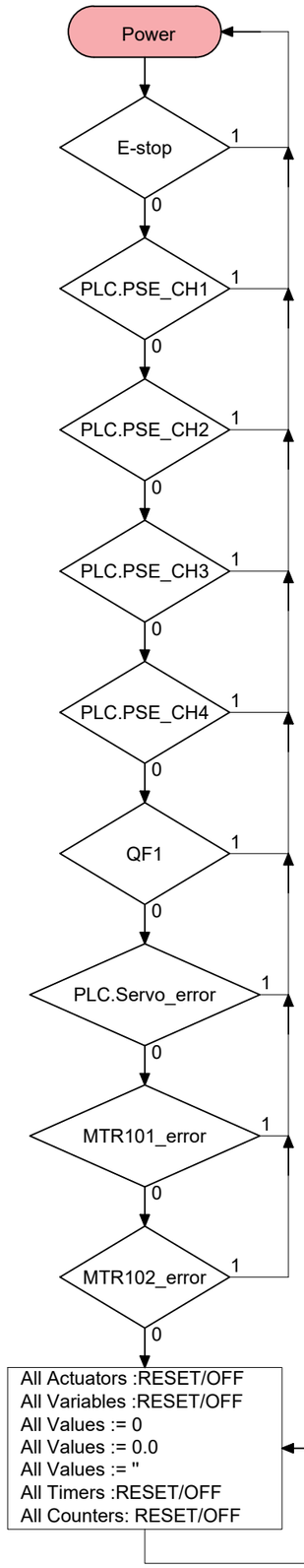
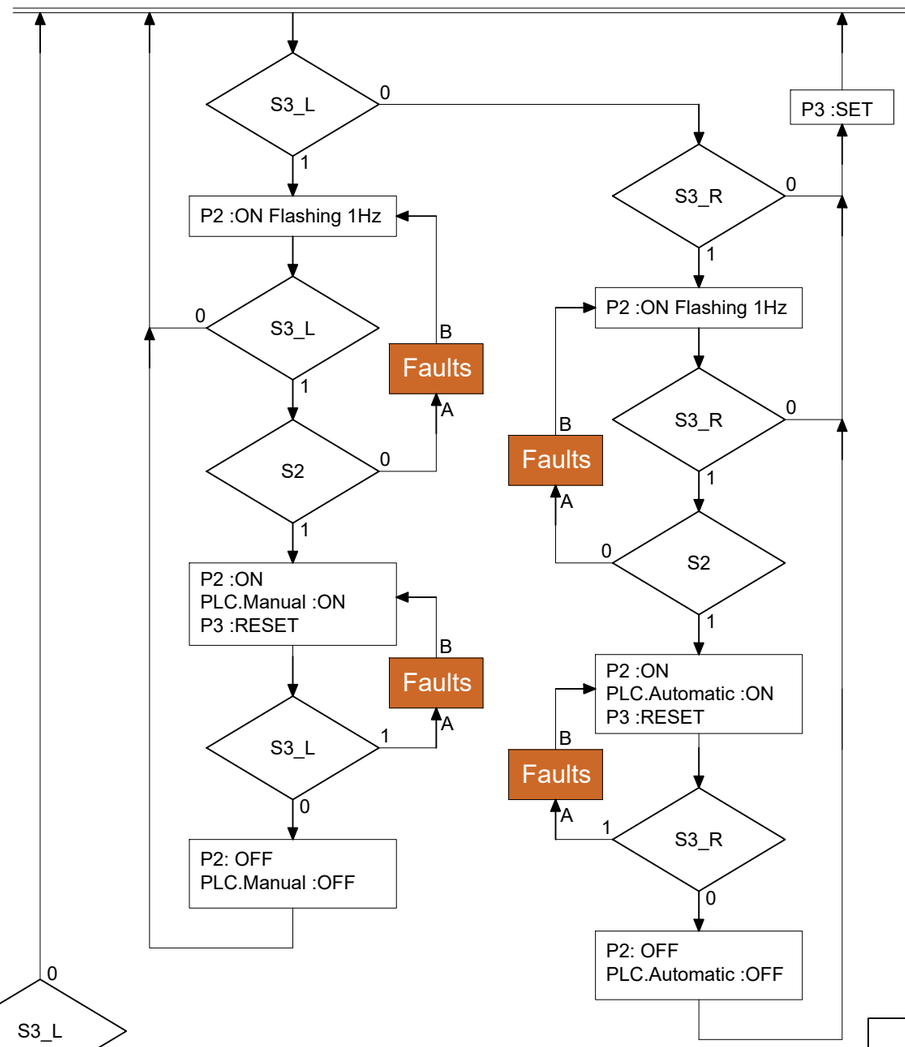
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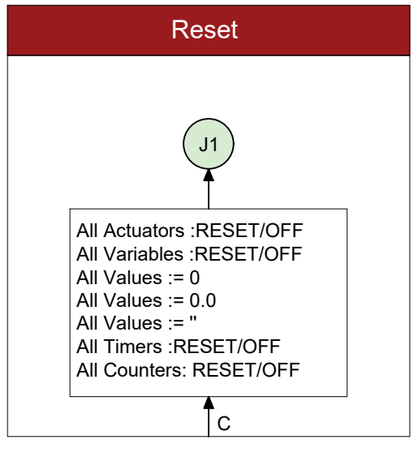
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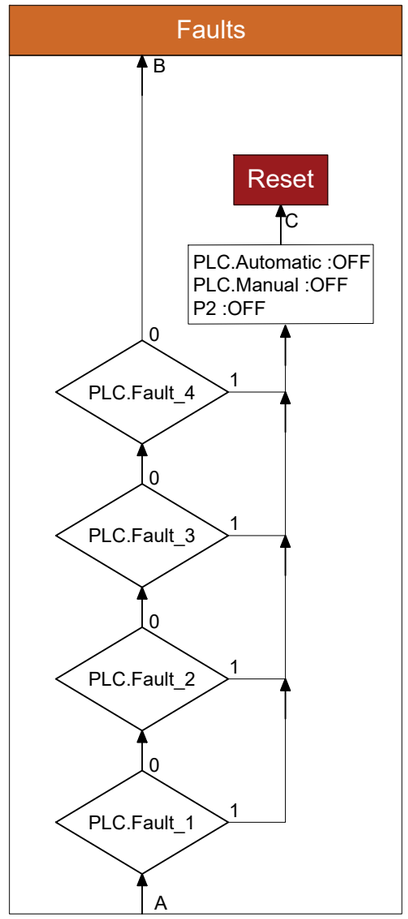
Skill: Skill 19 Industrial Control				
Design by: Rodolfo Neves, SCM				
Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 01 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Module B – Operating flowchart				Projection:
Extra Info 1		Extra Info 2		

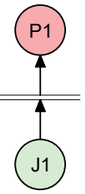
Notes:
"1" (One) indicates that a switch, push button, sensor, or other device is actuated, active, or in the TRUE state.
"0" (Zero) indicates that a switch, push button, sensor, or other device is not actuated, inactive, or in the FALSE state.
:ON indicates that the specified output or device must be switched on or activated.
:OFF indicates that the specified output or device must be switched off or deactivated.
:SET indicates that the specified output, memory bit, or function must be set and remain active until a reset command is executed.
:RESET indicates that the specified output, memory bit, or function must be reset or deactivated.
:= indicates that a specific value must be assigned to a variable, parameter, or device.











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Design by: Rodolfo Neves, SCM				
Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 02 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Power ON – Manual and Automatic				Projection:
Extra Info 1	Extra Info 2			

P1

P2

PLC.Fault_1 :OFF

E-stop

0

1

PLC.Fault_1 :ON

PLC.Fault_2 :ON

PLC.PSE_CH1

1

0

PLC.PSE_CH2

1

0

PLC.PSE_CH3

1

0

PLC.PSE_CH4

1

0

PLC.Fault_2 :OFF

PLC.Fault_3 :OFF

QF1

0

1

PLC.Servo_error

0

1

PLC.Fault_3 :ON

PLC.Servo_error :ON

PLC.Servo_error_power

1

0

PLC.Servo_error_torque

1

0

PLC.Servo_error :OFF

PLC.Fault_4 :OFF

MTR101_error

0

1

MTR102_error

0

1

PLC.Fault_4 :ON



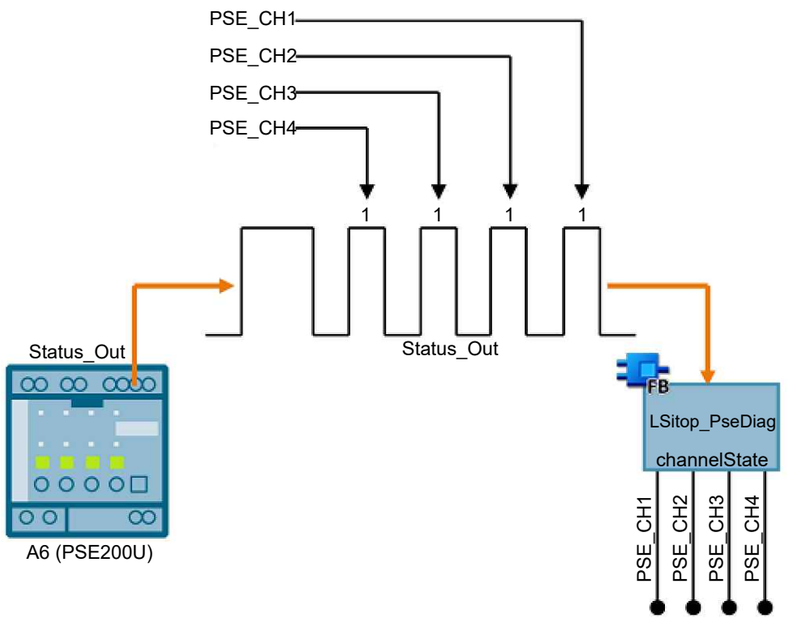
A18 (DS 0.3 - 1A)

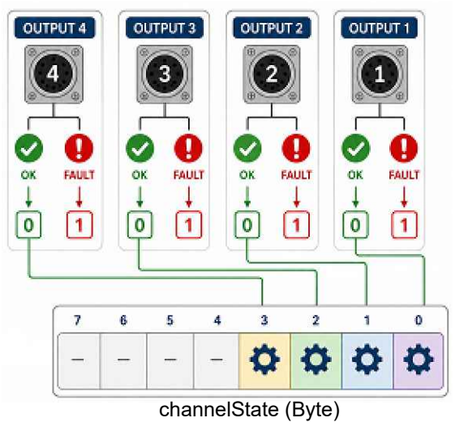
Process Data	Meaning	Variable
DI 0.0	Ready (automatic)	MTR102_ready
DI 0.1	Motor ON	MTR102_ON
DI 0.2	Group fault	MTR102_error
DQ 0.0	Motor CW	MTR102
DQ 0.3	Trip RESET	MTR102_reset



A19 (DS 0.3 - 1A)

Process Data	Meaning	Variable
DI 0.0	Ready (automatic)	MTR101_ready
DI 0.1	Motor ON	MTR101_ON
DI 0.2	Group fault	MTR101_error
DQ 0.0	Motor CW	MTR101
DQ 0.3	Trip RESET	MTR101_reset





channelState (Byte)

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Skill: Skill 19 Industrial Control

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Last Update: 21.08.2026 | Scale: N/A | Paper: A4 | Page: 03 of 24

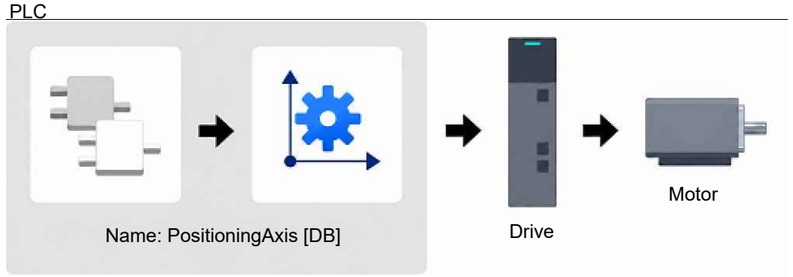
File Name: WSC2026_TP19_MB_flowchart_02_en | Rev: V1

Description: Power ON – Faults | Projection:

Extra Info 1 | Extra Info 2

P2

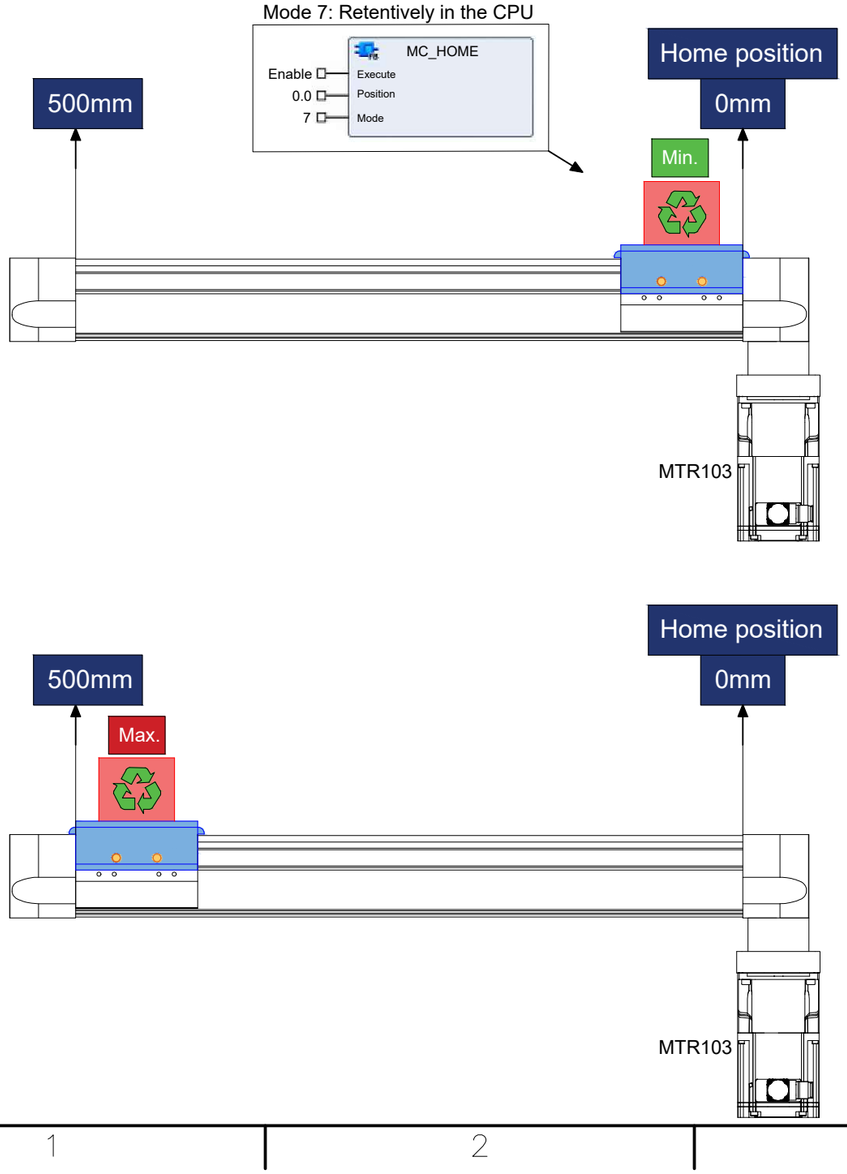
PLC



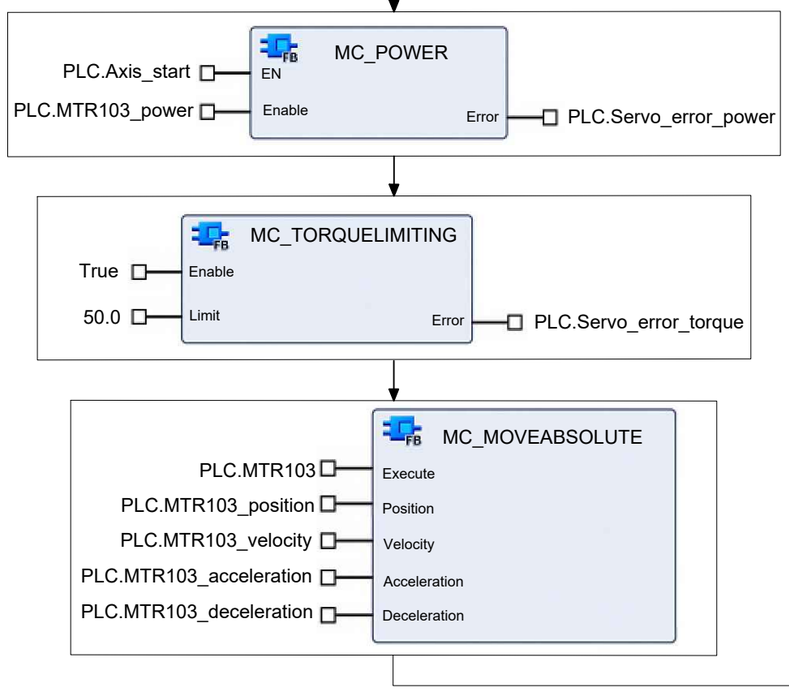
P3

```
PLC.Actual_MTR103_position := "PositionAxis".ActualPosition
PLC.Actual_MTR103_velocity := ABS("PositionAxis".ActualVelocity)
PLC.Actual_MTR103_acceleration := ABS("PositionAxis".ActualAcceleration)
PLC.Actual_MTR103_torque := ABS("PositionAxis".StatusTorqueData.ActualTorque)
```

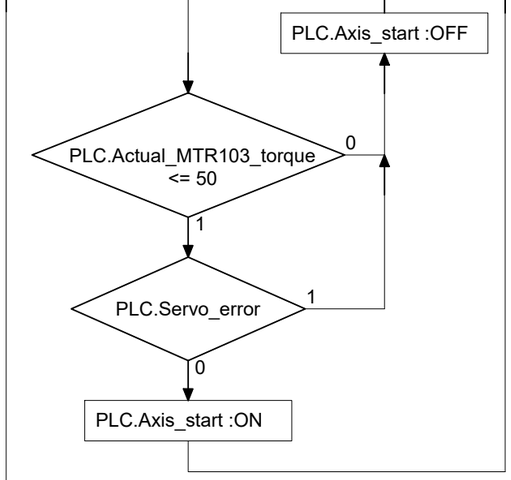
Mode 7: Retentively in the CPU



P3



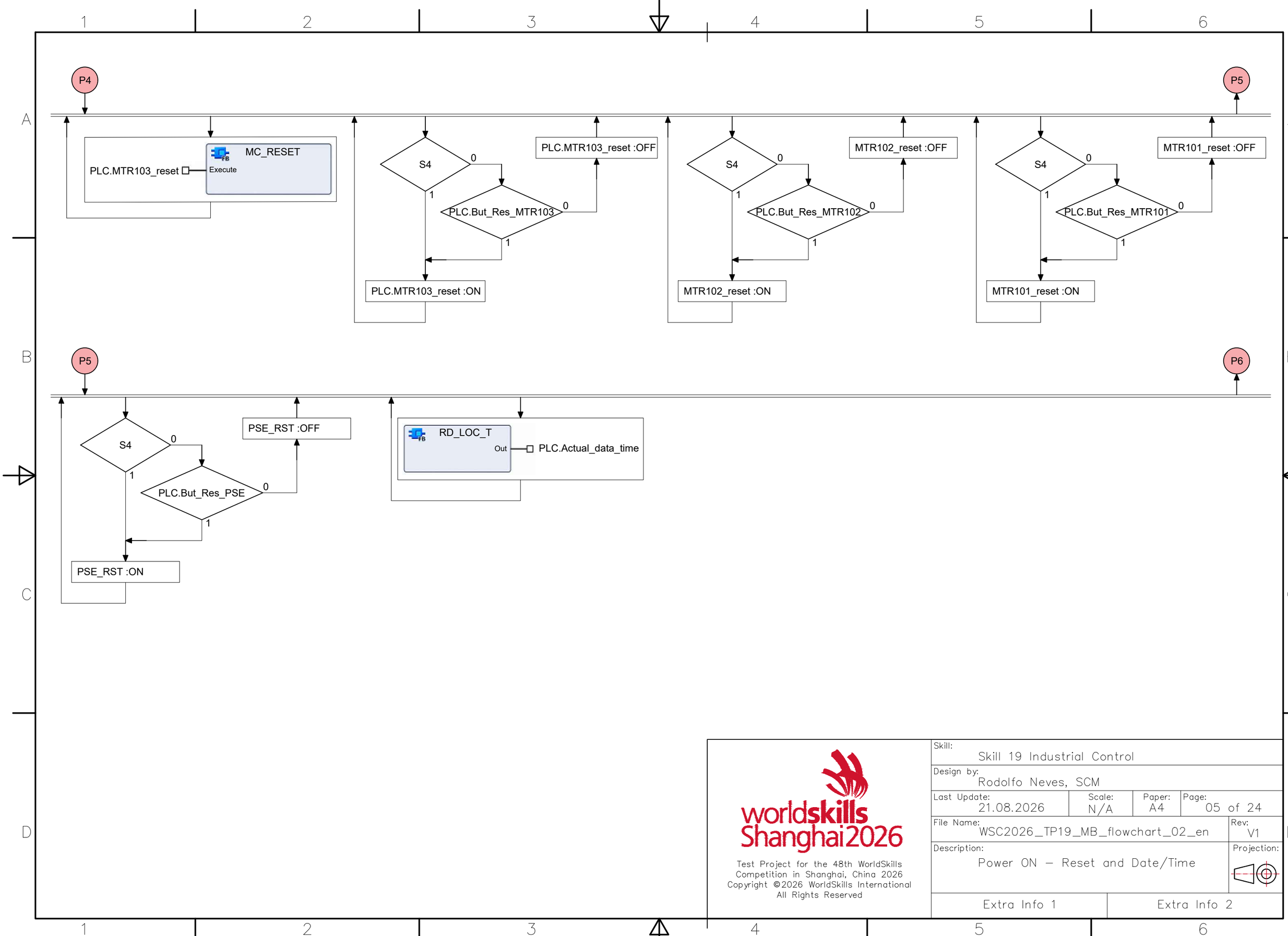
P4



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Design by: Rodolfo Neves, SCM			
Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 04 of 24
File Name: WSC2026_TP19_MB_flowchart_02_en			Rev: V1
Description: Power ON – Servo Drive			Projection:
Extra Info 1		Extra Info 2	



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Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 05 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Power ON – Reset and Date/Time				Projection:
Extra Info 1	Extra Info 2			

Notes:
The (Local~PROFINET_IO-System) tag is of data type (HW_IOSYSTEM)

P6

P7

PLC.Status_Connected [PLC.S210_device_number]
0 → PLC.ProfinetStatus_S210 := 0
1
PLC.Status_Faulty [PLC.S210_device_number]
1 → PLC.ProfinetStatus_S210 := 3
0
PLC.Status_Warning [PLC.S210_device_number]
1 → PLC.ProfinetStatus_S210 := 2
0 → PLC.ProfinetStatus_S210 := 1

PLC.Status_Connected [PLC.ACT_device_number]
0 → PLC.ProfinetStatus_ACT := 0
1
PLC.Status_Faulty [PLC.ACT_device_number]
1 → PLC.ProfinetStatus_ACT := 3
0
PLC.Status_Warning [PLC.ACT_device_number]
1 → PLC.ProfinetStatus_ACT := 2
0 → PLC.ProfinetStatus_ACT := 1

PLC.Status_Connected [PLC.ET_eco_device_number]
0 → PLC.ProfinetStatus_ET_eco := 0
1
PLC.Status_Faulty [PLC.ET_eco_device_number]
1 → PLC.ProfinetStatus_ET_eco := 3
0
PLC.Status_Warning [PLC.ET_eco_device_number]
1 → PLC.ProfinetStatus_ET_eco := 2
0 → PLC.ProfinetStatus_ET_eco := 1

P7

DeviceStates
"Local~PROFINET_IO-System" → LADDR
4 → MODE
PLC.Status_Connected ↔ STATE
Ret_Val → PLC.Ret_Connected

DeviceStates
"Local~PROFINET_IO-System" → LADDR
2 → MODE
PLC.Status_Faulty ↔ STATE
Ret_Val → PLC.Ret_Faulty

DeviceStates
"Local~PROFINET_IO-System" → LADDR
5 → MODE
PLC.Status_Warning ↔ STATE
Ret_Val → PLC.Ret_Warning

P8

PLC.S210_device_number := PROFINET interface → Ethernet addresses → PROFINET → Device number
PLC.ACT_device_number := PROFINET interface → Ethernet addresses → PROFINET → Device number
PLC.ET_eco_device_number := PROFINET interface → Ethernet addresses → PROFINET → Device number

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Skill: Skill 19 Industrial Control				
Design by: Rodolfo Neves, SCM				
Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 06 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Power ON – Device Status				Projection:
Extra Info 1		Extra Info 2		

P8

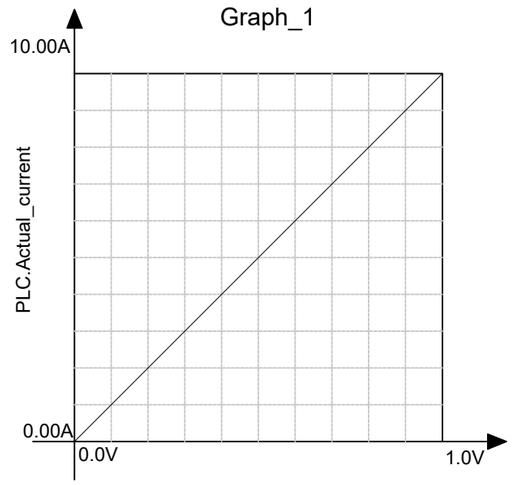
P9

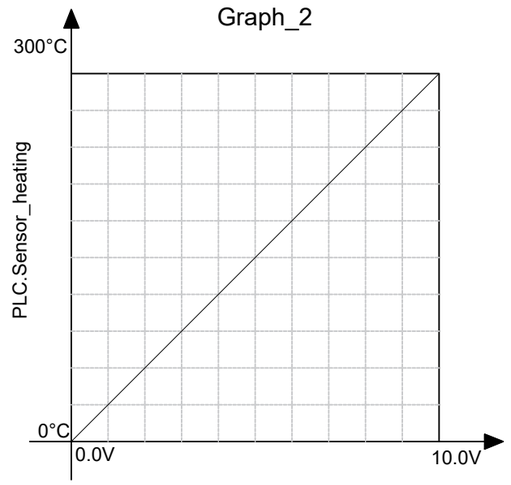
scale (Graph_1)
A5_Imon to PLC.Actual_current

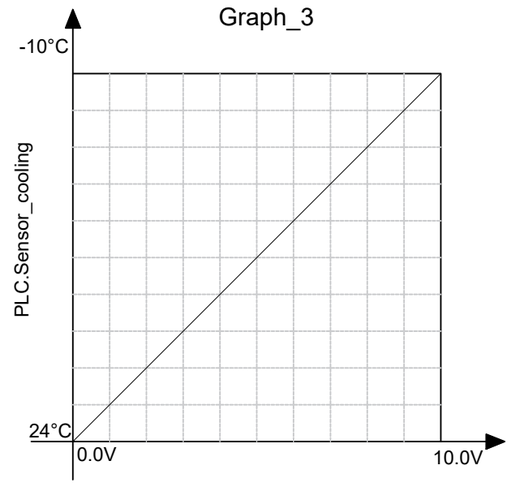
scale (Graph_2)
TT301 to PLC.Sensor_heating

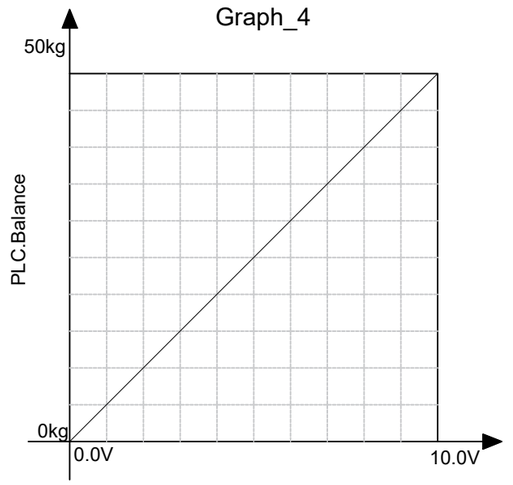
scale (Graph_3)
TT302 to PLC.Sensor_cooling

scale (Graph_4)
WT303 to PLC.Balance









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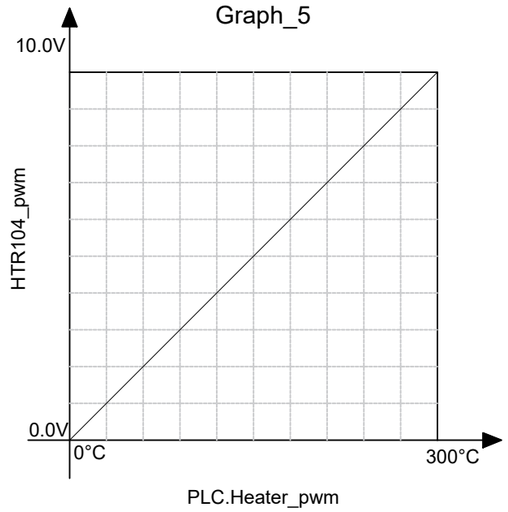
Skill: Skill 19 Industrial Control				
Design by: Rodolfo Neves, SCM				
Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 07 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Power ON – PLC Analogic Inputs Scales				Projection:
Extra Info 1		Extra Info 2		

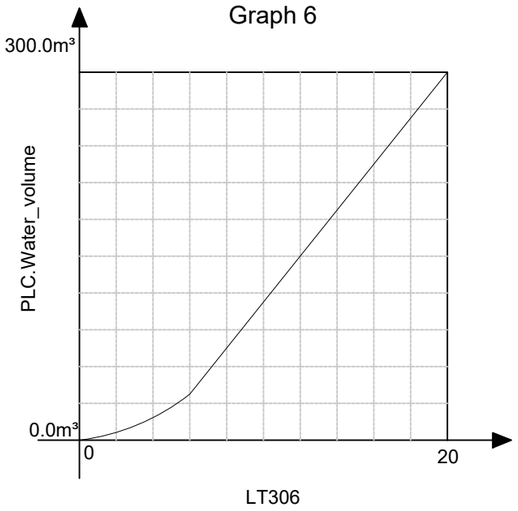
P9

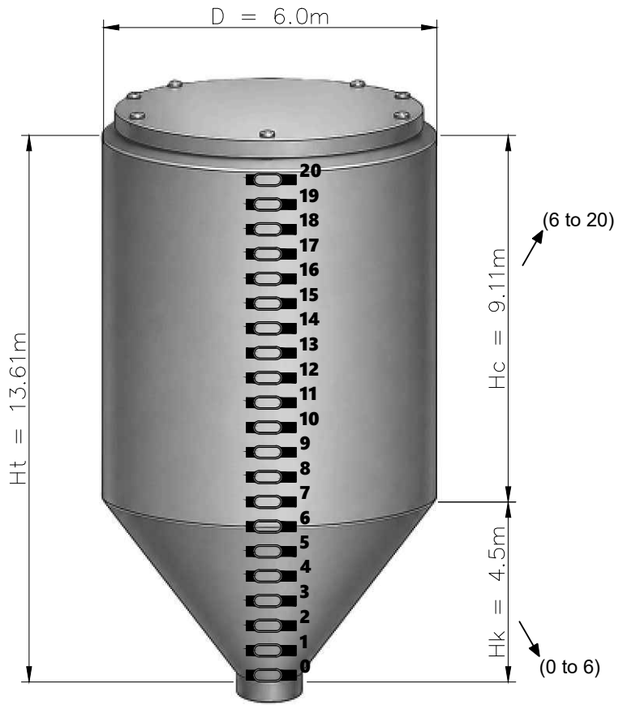
P10

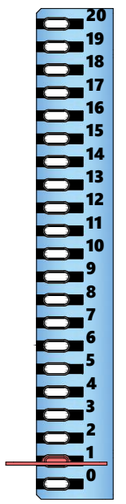
scale (Graph_5)
PLC.Heater_pwm to HTR104_pwm

scale (Graph_6)
LT306 to PLC.Water_volume



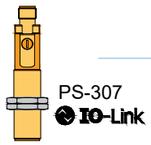




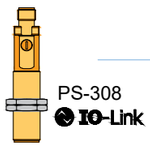




Part B



Meaning	Variable
Current status (BDC1)	PS307



Meaning	Variable
Current status (BDC1)	PS308



Box Sealer



Painting

$$Water_volume_cylindric = \pi \times R^2 \times H_c$$

$$Water_volume_cone = \frac{\pi \times R^2 \times H_k}{3}$$

$$Water_volume = Water_volume_cone + Water_volume_cylindric$$

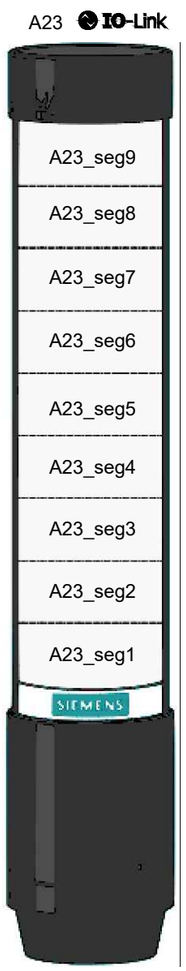
$$R = \frac{D}{2} \qquad \pi = 3.14159$$

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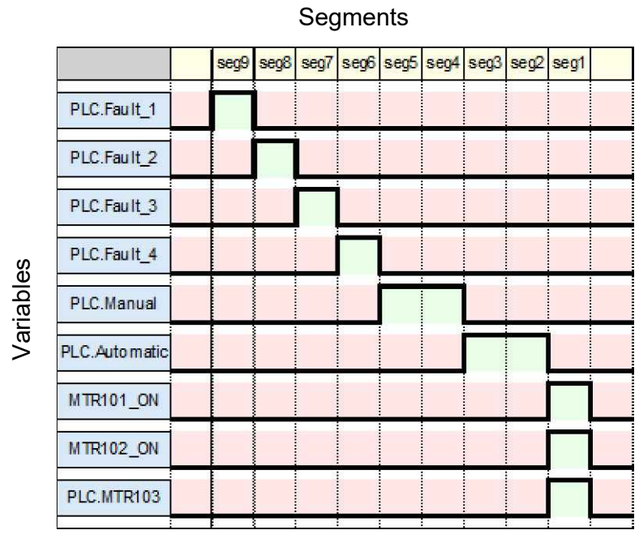
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Design by: Rodolfo Neves, SCM			
Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 08 of 24
File Name: WSC2026_TP19_MB_flowchart_02_en			Rev: V1
Description: Power ON – PLC Analogic Output and IO-Link			Projection:
Extra Info 1		Extra Info 2	



Segment	Color	Effect	Brightness
A23_seg9	255,0,0	Blink 2Hz	100%
A23_seg8	255,0,0	Blink 2Hz	100%
A23_seg7	255,0,0	Blink 2Hz	100%
A23_seg6	255,0,0	Blink 2Hz	100%
A23_seg5	0,0,255	Continuous	100%
A23_seg4	0,0,255	Continuous	100%
A23_seg3	255,227,0	Continuous	100%
A23_seg2	255,227,0	Continuos	100%
A23_seg1	0,255,0	Rotating	100%



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Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 09 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Power ON – Signal Tower				Projection:
Extra Info 1		Extra Info 2		

P11

P12

M1

Reset

C

PLC.Manual

0

1

PLC.Total_Bottles > 9

PLC.But_Blue_Bottle

PLC.Bottle_type := 2
PLC.Blue_Bottle := PLC.Blue_Bottle + 1
PLC.Total_Bottles := PLC.Total_Bottles + 1

PLC.Bottles :ON

PLC.But_Blue_Bottle

PLC.Bottles :OFF

PLC.Total_Bottles > 9

PLC.But_Green_Bottle

PLC.Bottle_type := 3
PLC.Green_Bottle := PLC.Green_Bottle + 1
PLC.Total_Bottles := PLC.Total_Bottles + 1

PLC.Bottles :ON

PLC.But_Green_Bottle

PLC.Bottles :OFF

PLC.Total_Bottles > 9

PLC.But_Clear_Bottle

PLC.Bottle_type := 1
PLC.Clear_Bottle := PLC.Clear_Bottle + 1
PLC.Total_Bottles := PLC.Total_Bottles + 1

PLC.Bottles :ON

PLC.But_Clear_Bottle

PLC.Bottles :OFF

PLC.Total_Bottles > 9

PLC.But_Yellow_Bottle

PLC.Bottle_type := 4
PLC.Yellow_Bottle := PLC.Yellow_Bottle + 1
PLC.Total_Bottles := PLC.Total_Bottles + 1

PLC.Bottles :ON

PLC.But_Yellow_Bottle

PLC.Bottles :OFF

PLC.Total_Bottles > 0

MTR101_ready

PLC.But_MTR101_on

MTR101 :ON

PLC.But_MTR101_off

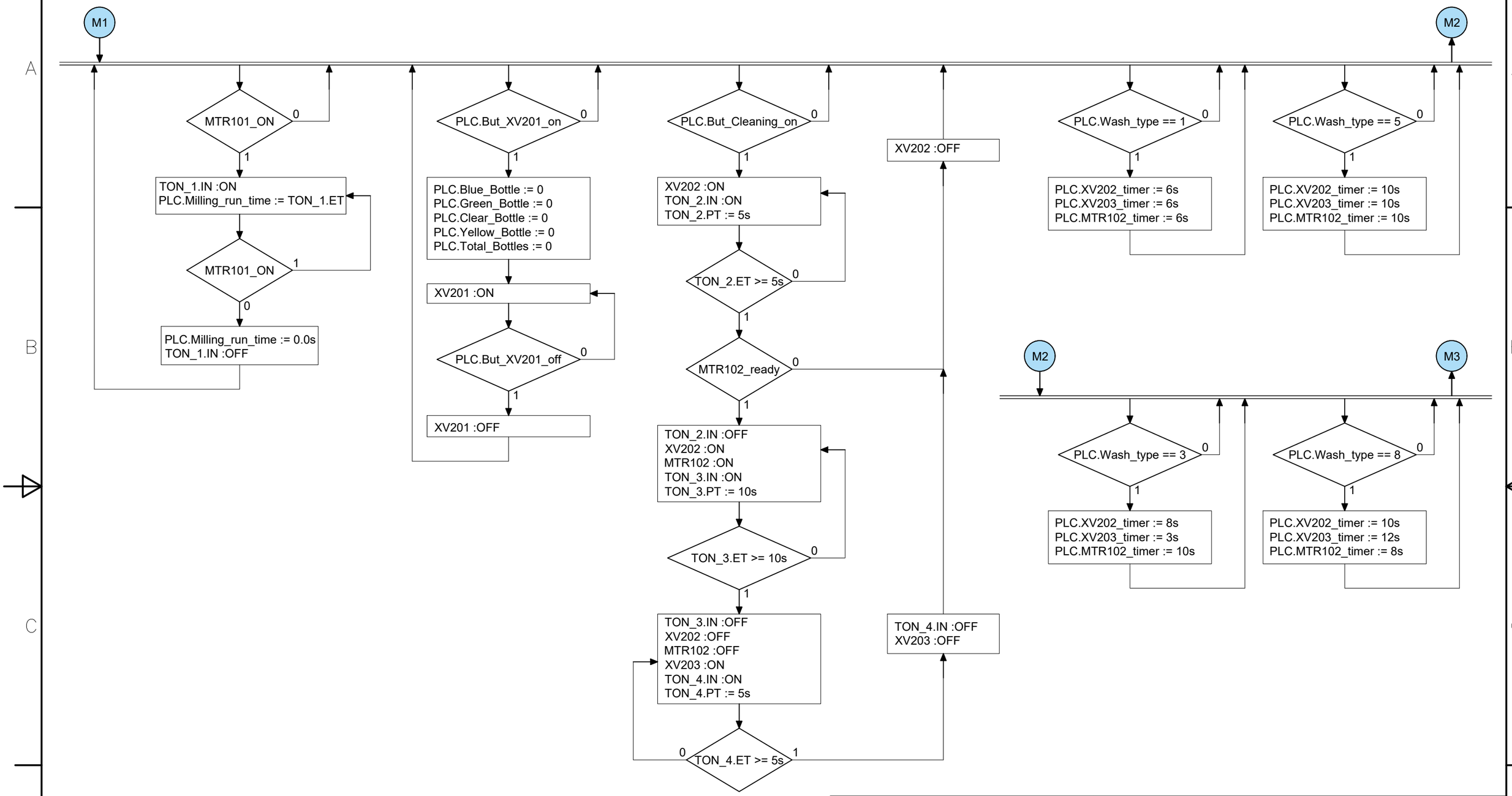
MTR101_ready

MTR101 :OFF

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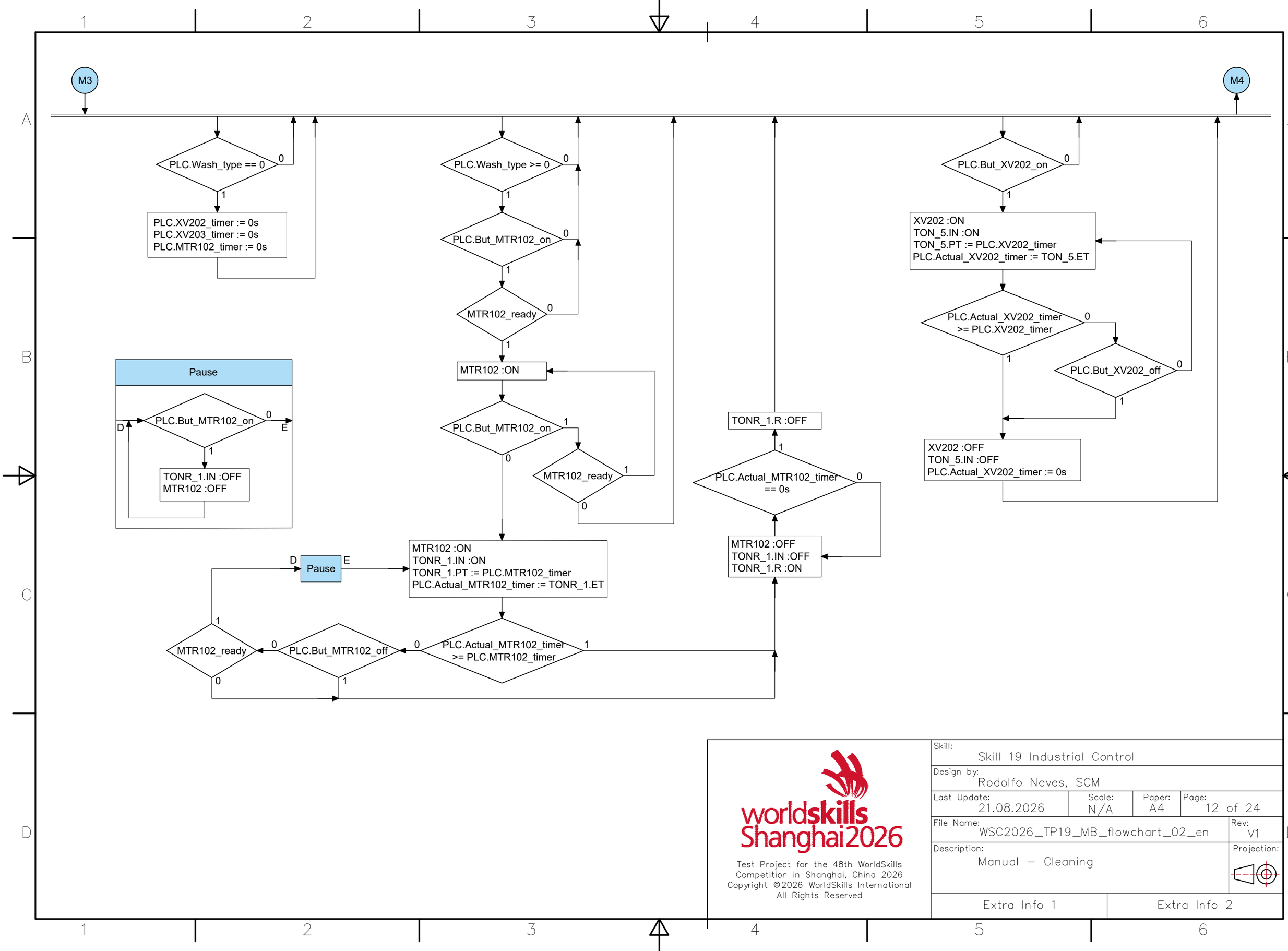
Skill: Skill 19 Industrial Control				
Design by: Rodolfo Neves, SCM				
Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 10 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Manual – Milling				Projection:
Extra Info 1		Extra Info 2		



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Skill:	Skill 19 Industrial Control
Design by:	Rodolfo Neves, SCM
Last Update:	21.08.2026
Scale:	N/A
Paper:	A4
Page:	11 of 24
File Name:	WSC2026_TP19_MB_flowchart_02_en
Rev:	V1
Description:	Manual – Milling / Cleaning
Projection:	
Extra Info 1	Extra Info 2



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Last Update:	21.08.2026
Scale:	N/A
Paper:	A4
Page:	12 of 24
File Name:	WSC2026_TP19_MB_flowchart_02_en
Rev:	V1
Description:	Manual – Cleaning
Projection:	
Extra Info 1	Extra Info 2

M4

PLC.But_XV203_on
0
1

XV203 :ON
TON_6.IN :ON
TON_6.PT := PLC.XV203_timer
PLC.Actual_XV203_timer := TON_6.ET

PLC.Actual_XV203_timer
>= PLC.XV203_timer
0
1

PLC.But_XV203_off
0
1

XV203 :OFF
TONR_6.IN :OFF
PLC.Actual_XV203_timer := 0s

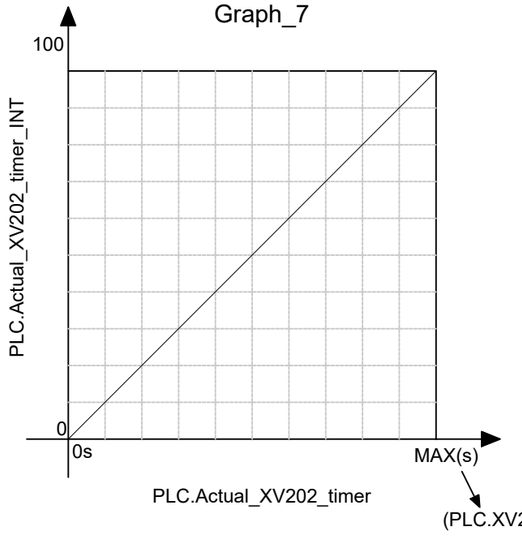
convert TIME to INT (Graph_7)
PLC.Actual_XV202_timer to
PLC.Actual_XV202_timer_INT

convert TIME to INT (Graph_8)
PLC.Actual_XV203_timer to
PLC.Actual_XV203_timer_INT

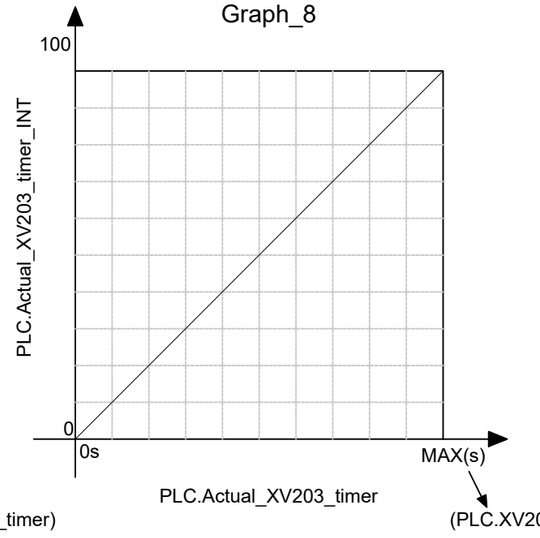
convert TIME to INT (Graph_9)
PLC.Actual_MTR102_timer to
PLC.Actual_MTR102_timer_INT

M5

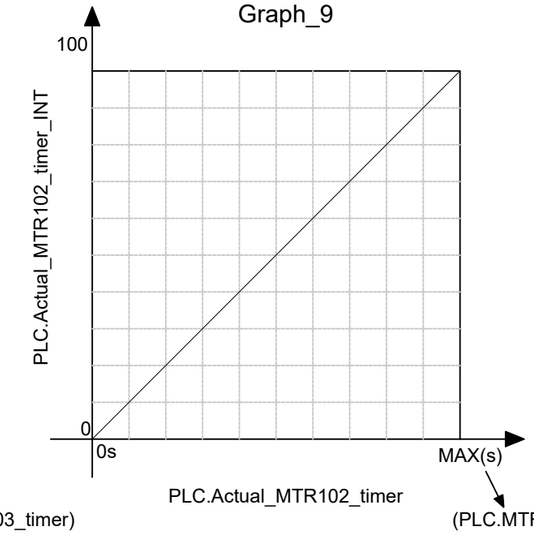
Graph_7



Graph_8



Graph_9



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Last Update: 21.08.2026	Scale: N/A	Paper: A4	Page: 13 of 24	
File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Manual – Cleaning				Projection:
Extra Info 1		Extra Info 2		

M5

PLC.Water_volume >= 30

1

0

PLC.But_XV204_on

0

1

XV204 :ON

PLC.But_XV204_off

0

1

PLC.Water_volume <= 100

1

0

XV204 :OFF

PLC.Volume_message := 'Cleaning Without Volume Water Control'
PLC.Water_volume_check_high := 0.0
PLC.Water_volume_check_low := 0.0

PLC.But_XV202_on

0

1

convert TIME to INT
PLC.XV202_timer to PLC.XV202_timer_INT

PLC.Water_volume_check_high := (15 * PLC.XV202_timer_INT) + 120
PLC.Water_volume_check_low := (15 * PLC.XV202_timer_INT) + 90

PLC.Water_volume <= PLC.Water_volume_check_high

0

1

PLC.Water_volume >= PLC.Water_volume_check_low

0

1

PLC.Volume_message := 'Cleaning With Volume Water Control Activated'

XV204

0

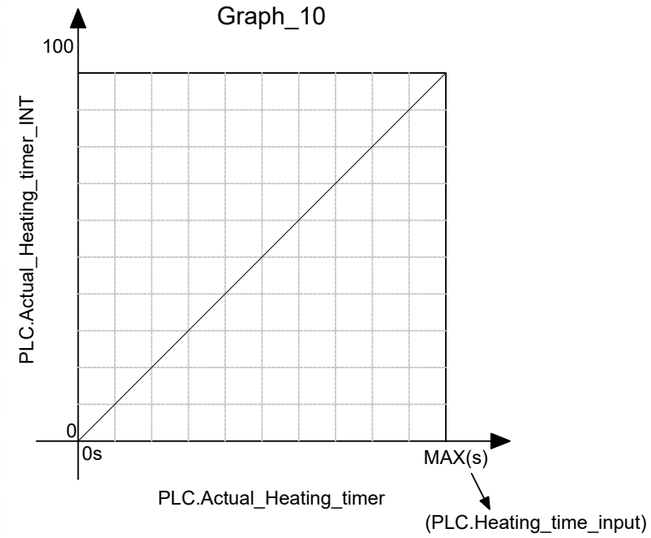
1

Part B

M6

convert TIME to INT (Graph_10)
PLC.Actual_Heating_timer to
PLC.Actual_Heating_timer_INT

Graph_10



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File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Manual – Cleaning / Melting				Projection:
Extra Info 1	Extra Info 2			

M6

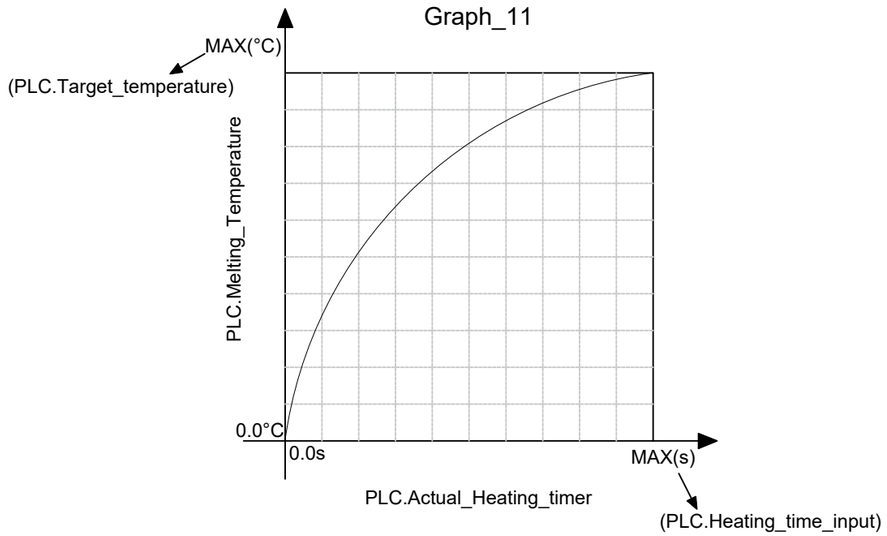
PLC.Melting_Temperature := 0.0

PLC.HTR104
0
1

$$PLC.Melting_Temperature = PLC.Target_temperature \times \frac{1 - e^{-K \times \left(\frac{PLC.Actual_Heating_timer}{PLC.Heating_time_input}\right)}}{1 - e^{-K}}$$

$$K = 3$$

Graph_11



M7

PLC.Target_temperature := PLC.Melting_Setpoint_Manual * 3

PLC.Temperature_deviation_positive :=
PLC.Melting_Temperature + ((PLC.Melting_Temperature * PLC.Deviation) / 100)

PLC.Temperature_deviation_negative :=
PLC.Melting_Temperature - ((PLC.Melting_Temperature * PLC.Deviation) / 100)

PLC.Melting_Setpoint_Manual > 0
0
1

PLC.But_HTR104_on
0
1

PLC.HTR104 :ON
TON_7.IN :ON
TON_7.PT := PLC.Heating_time_input
PLC.Actual_Heating_timer := TON_7.ET
PLC.Heater_pwm := PLC.Melting_Temperature

PLC.But_HTR104_off
0
1

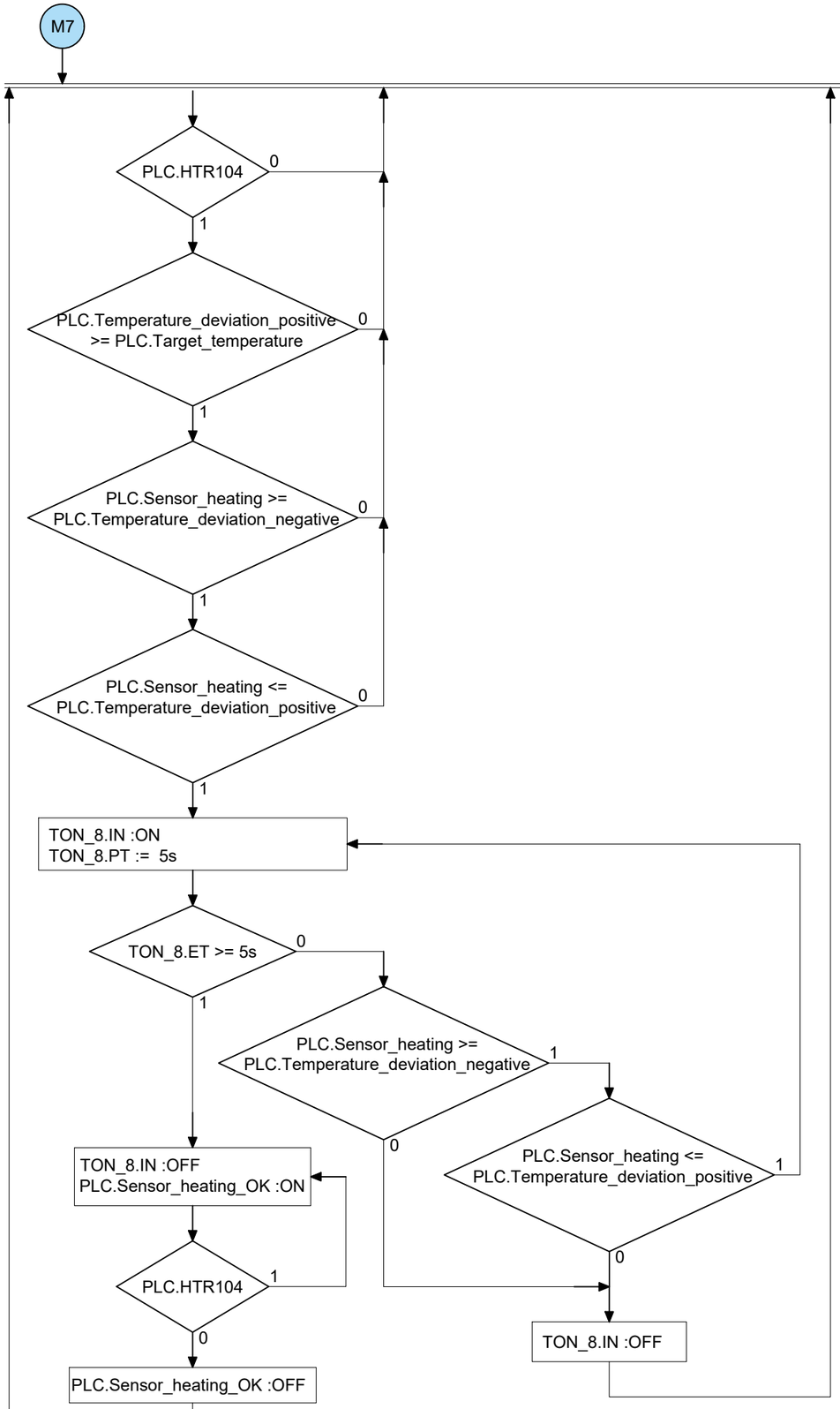
PLC.Sensor_heating_OK
0
1

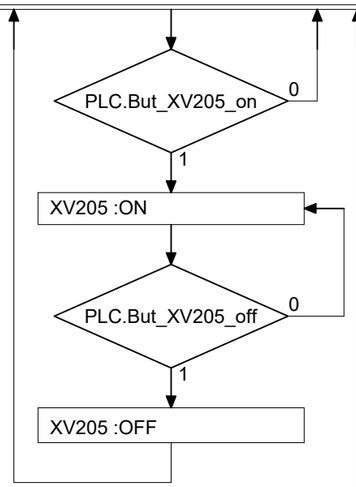
PLC.HTR104 :OFF
TON_7.IN :OFF
PLC.Heater_pwm := 0
PLC.Melting_Setpoint_Manual := 0.0
PLC.Heating_time_input := 0s

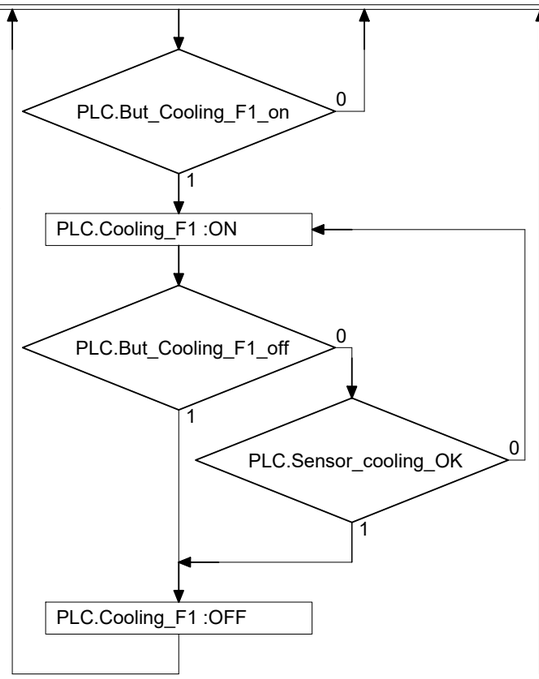
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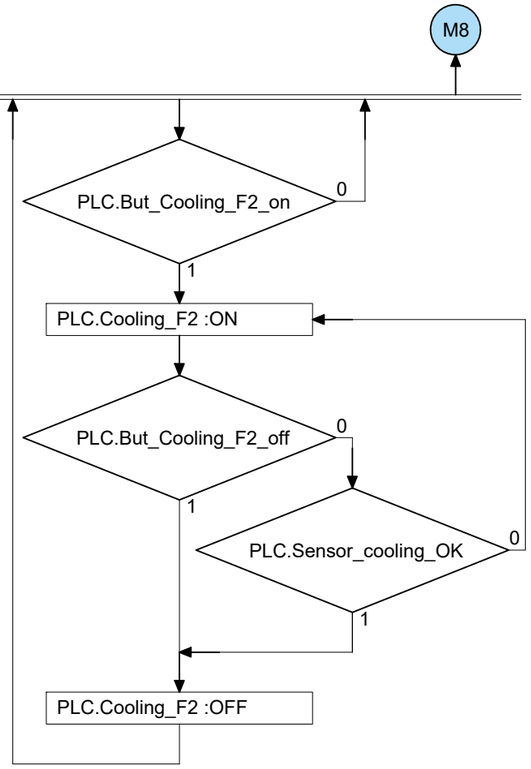
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Description: Manual – Melting				Projection:
Extra Info 1		Extra Info 2		





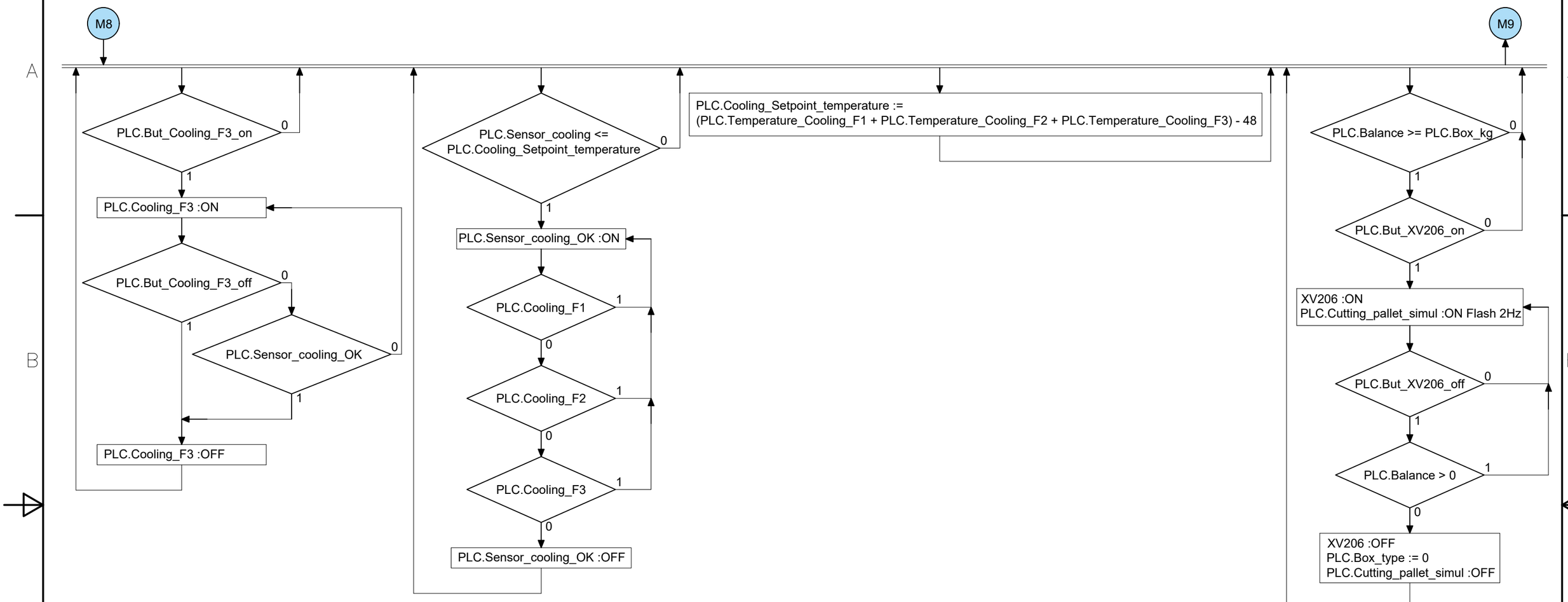




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File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Manual – Melting / Cooling				Projection:
Extra Info 1		Extra Info 2		



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File Name: WSC2026_TP19_MB_flowchart_02_en | Rev: V1

Description: Manual – Cooling / Weighing | Projection:

Extra Info 1 | Extra Info 2

M9

PLC.Box_type == 3 (0 / 1)

PLC.Box_kg := 0.30 * PLC.Density

PLC.Box_type == 5 (0 / 1)

PLC.Box_kg := 0.50 * PLC.Density

PLC.Box_type == 7 (0 / 1)

PLC.Box_kg := 0.75 * PLC.Density

PLC.Box_type == 10 (0 / 1)

PLC.Box_kg := 1.00 * PLC.Density

PLC.Box_type == 13 (0 / 1)

PLC.Box_kg := 1.30 * PLC.Density

PLC.Box_type == 16 (0 / 1)

PLC.Box_kg := 1.60 * PLC.Density

PLC.Box_type == 0 (0 / 1)

PLC.Box_kg := 0.0

M10

M10

PLC.Box_kg > 50.0 (0 / 1)

PLC.Box_type := 0
PLC.Density := 0.0
TON_9.IN :ON
TON_9.PT := 2s

TON_9.ET >= 2s (0 / 1)

TON_9.IN :OFF

PLC.Box_Sealer_slider > 0 (1 / 0)

PLC.Painting_slider > 0 (1 / 0)

PLC.But_MTR103_on (0 / 1)

PLC.MTR103_power :ON

PLC.But_MTR103_off (0 / 1)

PLC.MTR103_power :OFF

PLC.Distance_Conveyor > 0 (0 / 1)

TON_10.IN :ON
TON_10.PT := 1s

TON_10.ET >= 1s (0 / 1)

PLC.MTR103 :ON

PLC.Distance_Conveyor > 3 (1 / 0)

PLC.MTR103 :OFF
PLC.Distance_Conveyor := 0

PLC.MTR103_position := PLC.Conveyor_Position_Setpoint
PLC.MTR103_velocity := 100
PLC.MTR103_acceleration := 200
PLC.MTR103_deceleration := 200

PLC.Distance_Conveyor :=
ABS(PLC.Conveyor_Position_Setpoint - PLC.Actual_MTR103_position)

PLC.Manual (0 / 1)

Reset (C)

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File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Manual – Weighing / Conveying				Projection:
Extra Info 1	Extra Info 2			

P12

Reset

PLC.Automatic
- 0 → C
- 1

PLC.System_Ready
- 1
- 0

PLC.Quantity_Bottles > 0
- 0
- 1

PLC.Bottle_type >= 1
- 0
- 1

PLC.Size_Bottle_type >= 1
- 0
- 1

PLC.Wash_type >= 1
- 0
- 1

PLC.Box_type >= 1
- 0
- 1

PLC.Add
- 0
- 1

PLC.System_Ready :SET

PLC.Remove
- 0
- 1

PLC.Quantity_Bottles := 0
PLC.Bottle_type := 0
PLC.Size_Bottle_type := 0
PLC.Wash_type := 0
PLC.Box_type := 0
PLC.System_Ready :RESET

PLC.Cycle_Active
- 1
- 0

PLC.System_Ready
- 0
- 1

```
PLC.Milling_run_time_INT := (PLC.Quantity_Bottles * (PLC.Bottle_type + PLC.Size_Bottle_type)) / 2
PLC.Washing_cycles_INT := ROUND(1+ (((PLC.Quantity_Bottles + PLC.Wash_type) - 2) / 8))
PLC.Water_volume_setpoint := PLC.Wash_type * 37
PLC.Melting_Temperature := (PLC.Bottle_type * 30) + (PLC.Washing_cycles_INT *30) + (PLC.Wash_type *10)
PLC.Deviation := 5 + (PLC.Melting_Temperature / 60)
PLC.Temperature_deviation_positive := PLC.Melting_Temperature + ((PLC.Melting_Temperature * PLC.Deviation) / 100)
PLC.Temperature_deviation_negative := PLC.Melting_Temperature - ((PLC.Melting_Temperature * PLC.Deviation) / 100)
PLC.Cooling_Setpoint_temperature := 24 - ((PLC.Melting_Temperature / 300) * 34)
PLC.Density := PLC.Bottle_type * 3.12
PLC.Box_kg := (PLC.Box_type / 10) * PLC.Density
PLC.Temperature_Cooling_F1 := 16.8 + (PLC.Cooling_Setpoint_temperature * 0.30)
PLC.Temperature_Cooling_F2 := 14.4 + (PLC.Cooling_Setpoint_temperature * 0.40)
PLC.Temperature_Cooling_F3 := 16.8 + (PLC.Cooling_Setpoint_temperature * 0.30)
```

convert INT to TIME
PLC.Milling_run_time_INT to PLC.Milling_run_time

```
PLC.Milling_run_time := 0s
PLC.Washing_cycles_INT := 0
PLC.Water_volume_setpoint := 0
PLC.Melting_Temperature := 0.0
PLC.Deviation := 0.0
PLC.Temperature_deviation_positive := 0.0
PLC.Temperature_deviation_negative := 0.0
PLC.Cooling_Setpoint_temperature := 24.0
PLC.Density := 0.0
PLC.Box_kg := 0.0
PLC.Temperature_Cooling_F1 := 24.0
PLC.Temperature_Cooling_F2 := 24.0
PLC.Temperature_Cooling_F3 := 24.0
```

A1

PLC.Start
- 0
- 1

PLC.Cycle_Active: ON

PLC.Stop
- 0
- 1

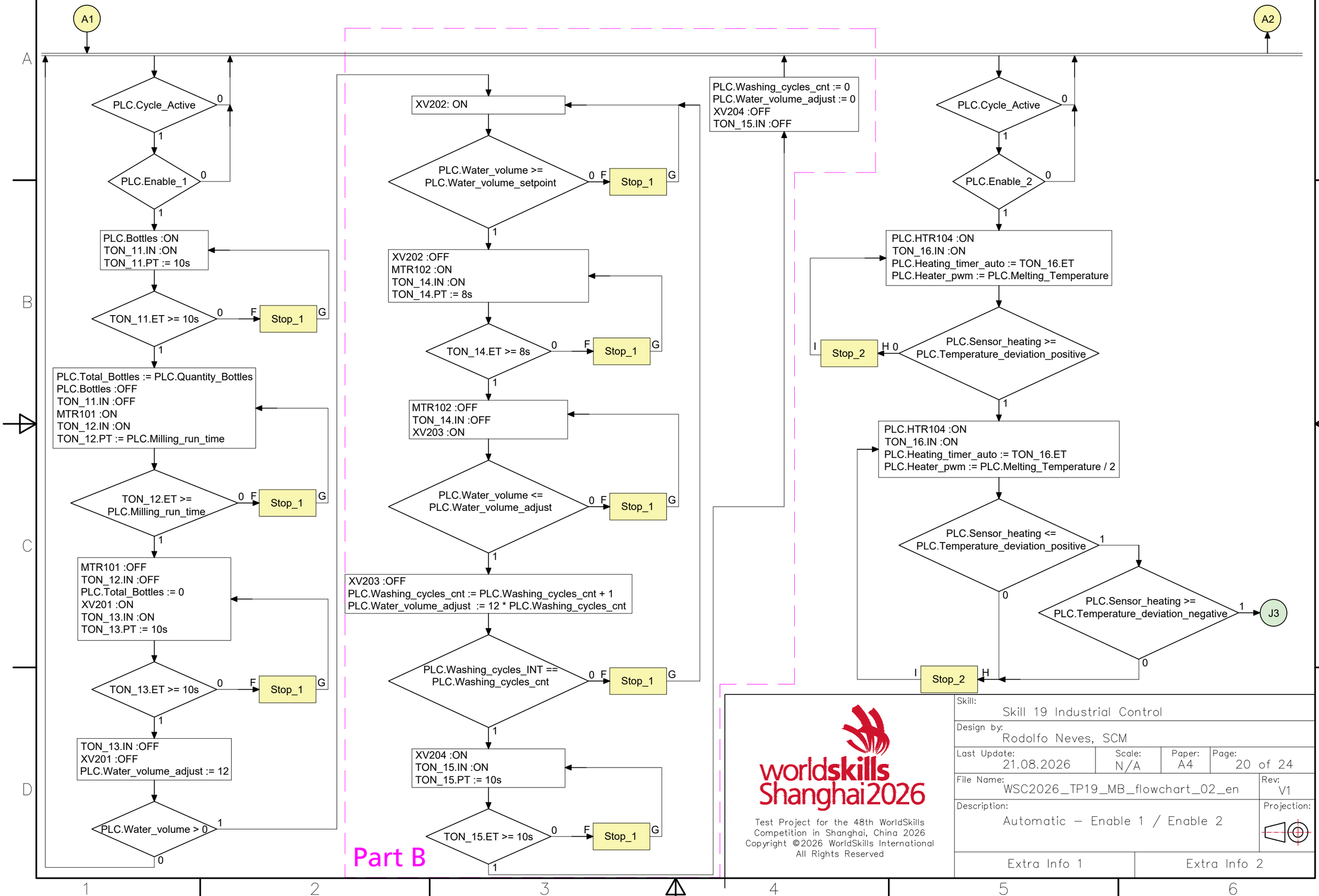
PLC.Cycle_Active: OFF

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Description: Automatic – Settings and Cycle Active				Projection:
Extra Info 1		Extra Info 2		



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File Name: WSC2026_TP19_MB_flowchart_02_en			Rev: V1
Description: Automatic – Enable 1 / Enable 2			Projection:
Extra Info 1	Extra Info 2		

A2

J3

PLC.Cooling_F1 :ON
PLC.Cooling_F2 :ON
PLC.Cooling_F3 :ON
PLC.HTR104 :OFF
TON_16.IN :OFF
PLC.Heating_timer_auto := 0s
PLC.Heater_pwm := 0

PLC.Sensor_cooling <= PLC.Cooling_Setpoint_temperature
0 H Stop_2 I
1

PLC.Cooling_F1 :ON
PLC.Cooling_F2 :ON
PLC.Cooling_F3 :ON
XV205 :ON

PLC.Balance >= PLC.Box_kg
0 H Stop_2 I
1

PLC.Cooling_F1 :OFF
PLC.Cooling_F2 :OFF
PLC.Cooling_F3 :OFF
XV205 :OFF
XV206 :ON

PLC.Balance <= 0
0 H Stop_2 I
1

XV206 :OFF

PLC.Sensor_cooling < 24
1 H Stop_2 I
0

PLC.Sensor_heating > 0
1 H Stop_2 I
0

PLC.Cycle_Active
0
1

PLC.Enable_3
0
1

PLC.MTR103_power :SET
TON_17.IN :ON
TON_17.PT := 1s

TON_17.ET >= 1s
0 J Stop_3 K
1

LS304
1
0

1
TON_17.IN :OFF
PLC.MTR103 :ON
PLC.MTR103_position := 0
PLC.MTR103_velocity := 50
PLC.MTR103_acceleration := 120
PLC.MTR103_deceleration := 120

LS304
0 J Stop_3 K
1

TON_17.IN :OFF
PLC.MTR103 :OFF
TON_18.IN :ON
TON_18.PT := 2s

TON_18.ET >= 2s
0 J Stop_3 K
1

2
TON_18.IN :OFF
PLC.MTR103 :ON
PLC.MTR103_position := 199
PLC.MTR103_velocity := 40
PLC.MTR103_acceleration := 100
PLC.MTR103_deceleration := 100

PS307
0 J Stop_3 K
1

PLC.MTR103 :OFF
PLC.MTR103_power :RESET

PLC.Actual_MTR103_velocity > 0
1 J Stop_3 K
0

XV207 :SET

PLC.Box_Sealer_simul >= 35
0 J Stop_3 K
1

PLC.Box_simul_auto := 1

PLC.Box_Sealer_simul <= 35
0 J Stop_3 K
1

XV207 :RESET
PLC.MTR103_power :SET
TON_19.IN :ON
TON_19.PT := 2s

TON_19.ET >= 2s
0 J Stop_3 K
1

3
TON_19.IN :OFF
PLC.MTR103 :ON
PLC.MTR103_position := 378
PLC.MTR103_velocity := 40
PLC.MTR103_acceleration := 100
PLC.MTR103_deceleration := 100

PS308
0 J Stop_3 K
1

J4

A3

Part B

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File Name: WSC2026_TP19_MB_flowchart_02_en			Rev: V1
Description: Automatic – Enable 2 / Enable 3			Projection:
Extra Info 1		Extra Info 2	

A3

J4

PLC.MTR103 :OFF
PLC.MTR103_power :RESET

PLC.Actual_MTR103_velocity > 0 — 1 → J → Stop_3 → K

0

XV208 :SET
PLC.Box_simul_auto := 2

PLC.Painting_simul >= 100 — 0 → J → Stop_3 → K

1

XV208 :RESET
PLC.MTR103_power :SET
TON_20.IN :ON
TON_20.PT := 2s

TON_20.ET >= 2s — 0 → J → Stop_3 → K

1

TON_20.IN :OFF
PLC.MTR103 :ON
PLC.MTR103_position := 500
PLC.MTR103_velocity := 40
PLC.MTR103_acceleration := 100
PLC.MTR103_deceleration := 100

4

LS305 — 0 → J → Stop_3 → K

1

PLC.Box_simul_auto := 0
TON_21.IN :OFF

1

TON_21.ET >= 10s — 0 → J → Stop_3 → K

PLC.MTR103_power :RESET
PLC.MTR103 :OFF
TON_21.IN :ON
TON_21.PT := 10s

Part B

A4

J2

Stop_1

F → PLC.Cycle_Active — 1 → PLC.Enable_1 — 1 → G

0 0

PLC.Bottles :OFF
XV201 :OFF
XV202 :OFF
XV203 :OFF
XV204 :OFF
MTR101 :OFF
MTR102 :OFF
TON_11.IN :OFF
TON_12.IN :OFF
TON_13.IN :OFF
TON_14.IN :OFF
TON_15.IN :OFF
PLC.Total_Bottles := 0
PLC.Water_volume_adjust := 0
PLC.Washing_cycles_cnt :=0

J2

Stop_2

H → PLC.Cycle_Active — 1 → PLC.Enable_2 — 1 → I

0 0

PLC.HTR104 :OFF
XV205 :OFF
XV206 :OFF
PLC.Cooling_F1 :OFF
PLC.Cooling_F2 :OFF
PLC.Cooling_F3 :OFF
TON_16.IN :OFF
PLC.Heating_timer_auto := 0s
PLC.Heater_pwm := 0

J2

Stop_3

J → PLC.Cycle_Active — 1 → PLC.Enable_3 — 1 → K

0 0

PLC.MTR103 :OFF
PLC.MTR103_power :RESET
XV207 :RESET
XV208 :RESET
TON_17.IN :OFF
TON_18.IN :OFF
TON_19.IN :OFF
TON_20.IN :OFF
TON_21.IN :OFF
TON_22.IN :OFF
TON_23.IN :OFF
TON_24.IN :OFF
PLC.MTR103_velocity := 0
PLC.MTR103_acceleration := 0
PLC.MTR103_deceleration := 0
PLC.Box_Sealer_simul := 0
PLC.Painting_simul := 0
PLC.Box_simul_auto := 0

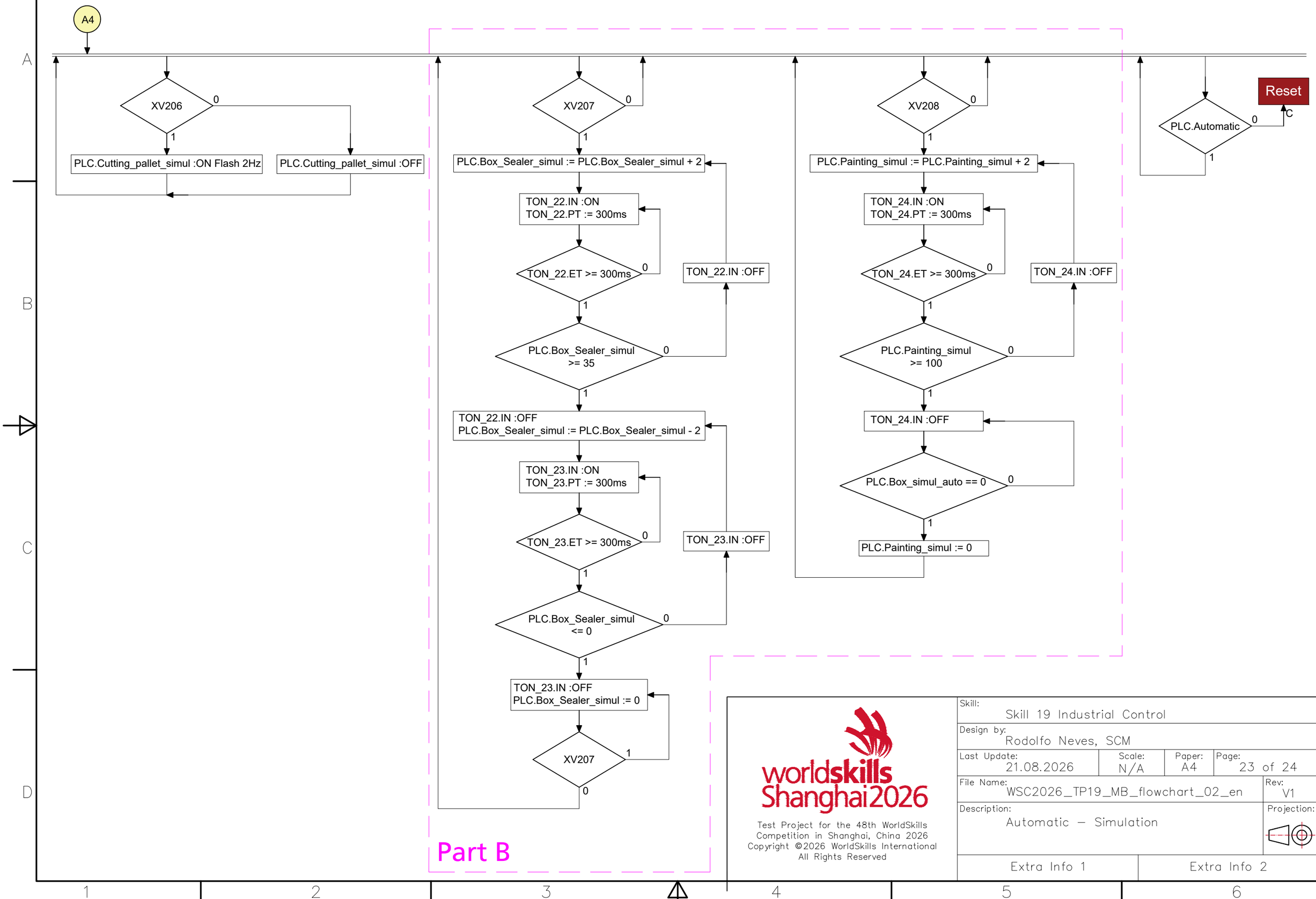
J2

Part B

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File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Automatic – Enable 3 and Stop System				Projection:
Extra Info 1		Extra Info 2		

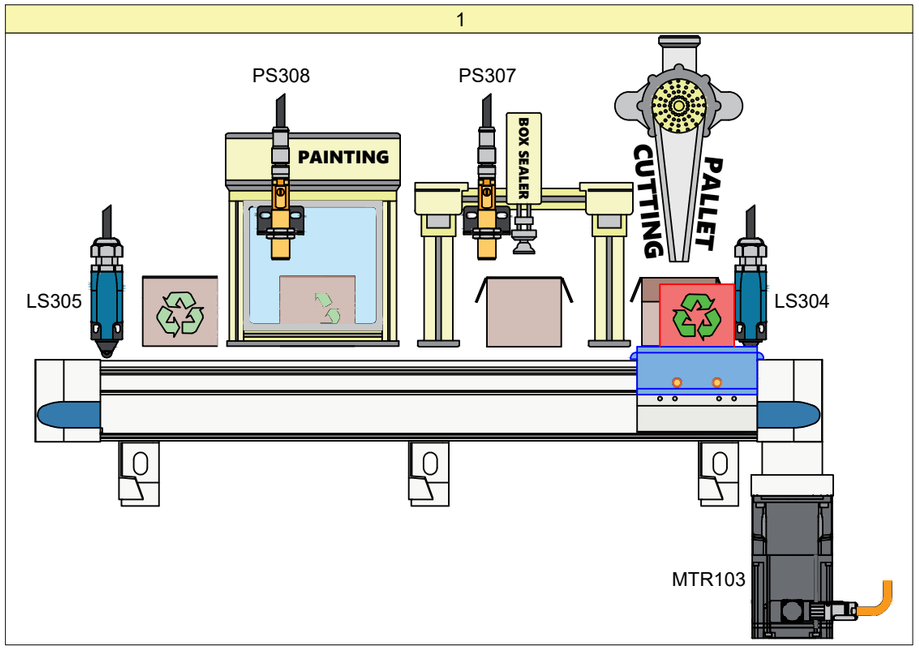


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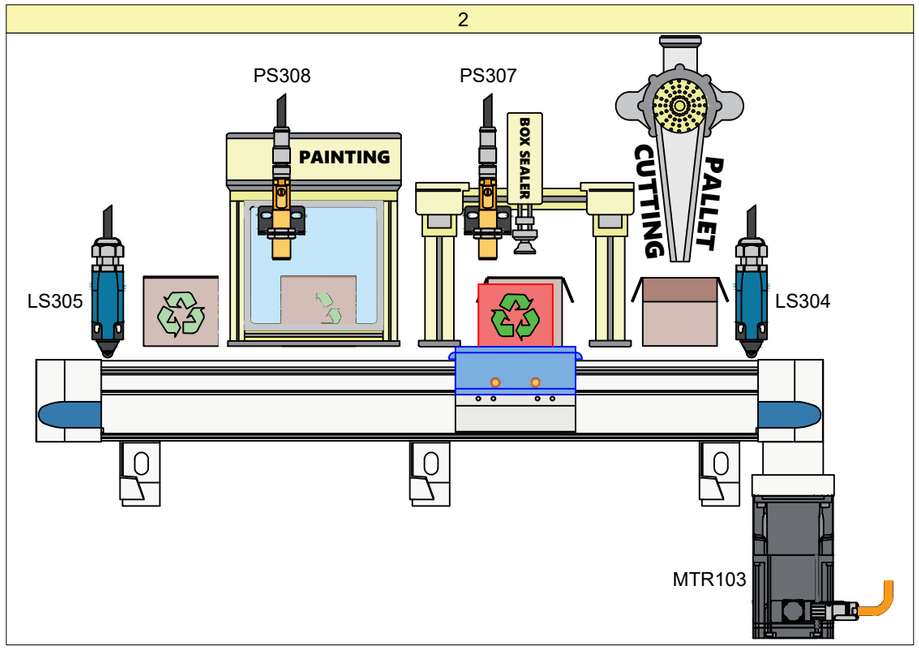
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File Name: WSC2026_TP19_MB_flowchart_02_en				Rev: V1
Description: Automatic – Simulation				Projection:
Extra Info 1		Extra Info 2		

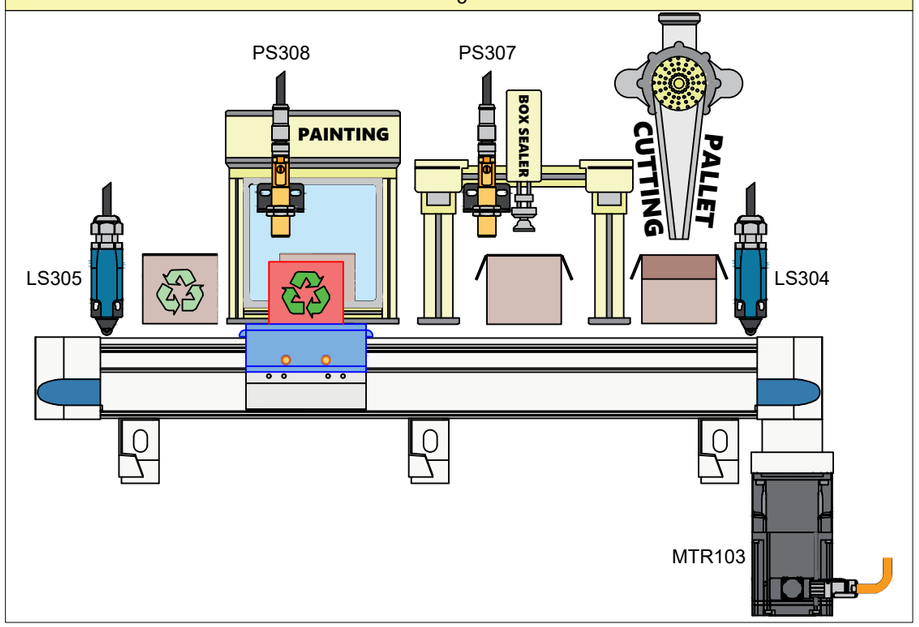
1



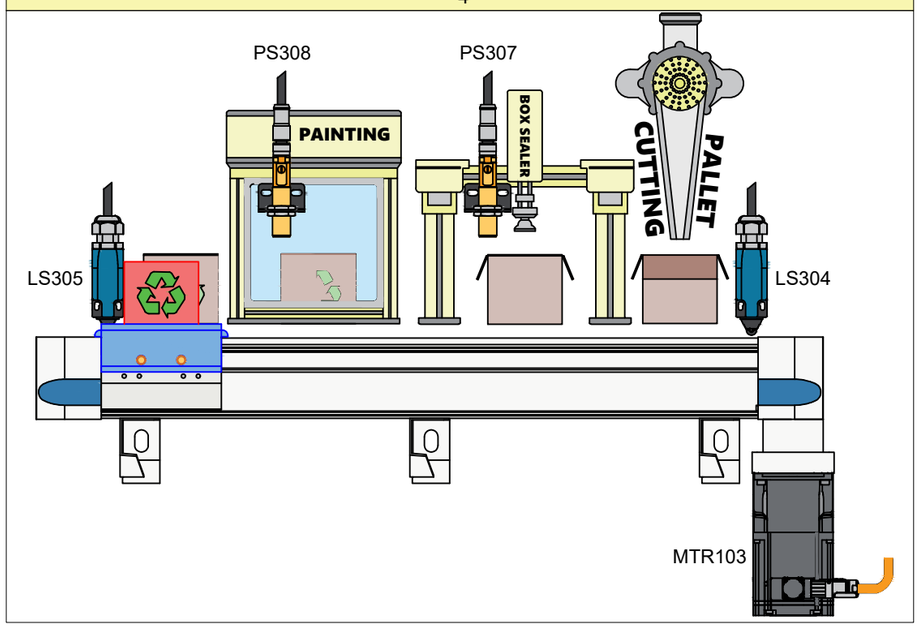
2



3



4



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Description: Automatic – Conveying — Projection:

Extra Info 1 | Extra Info 2