

中华人民共和国第一届职业技能大赛

甘肃选拔赛

工业控制项目

样卷-模块D-编程与调试

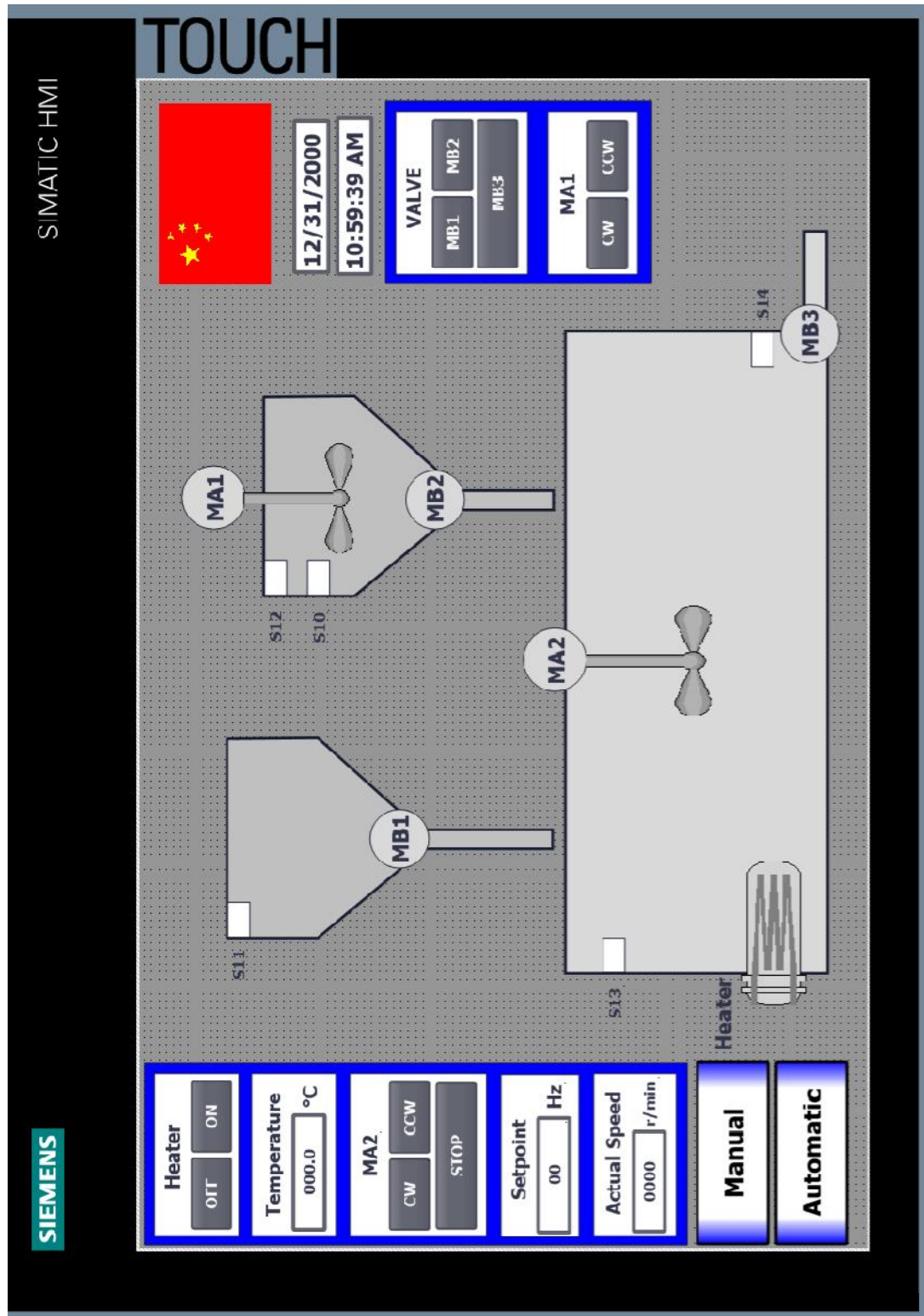
工位编号：_____

参赛编号：_____



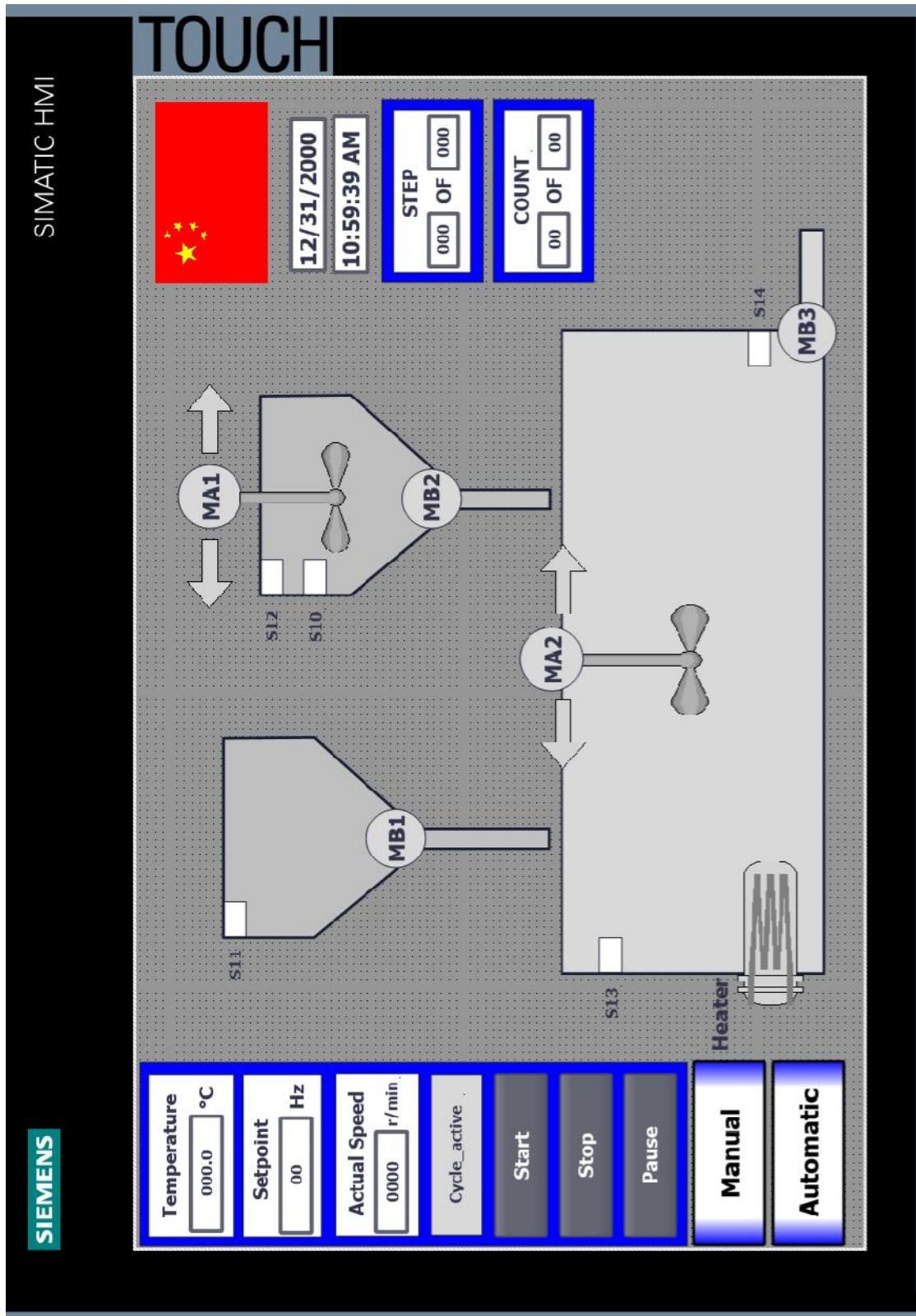
HMI - CONFIGURATION

MANUAL SCREEN OVERVIEW





AUTOMATIC SCREEN OVERVIEW





HMI VARIABLES

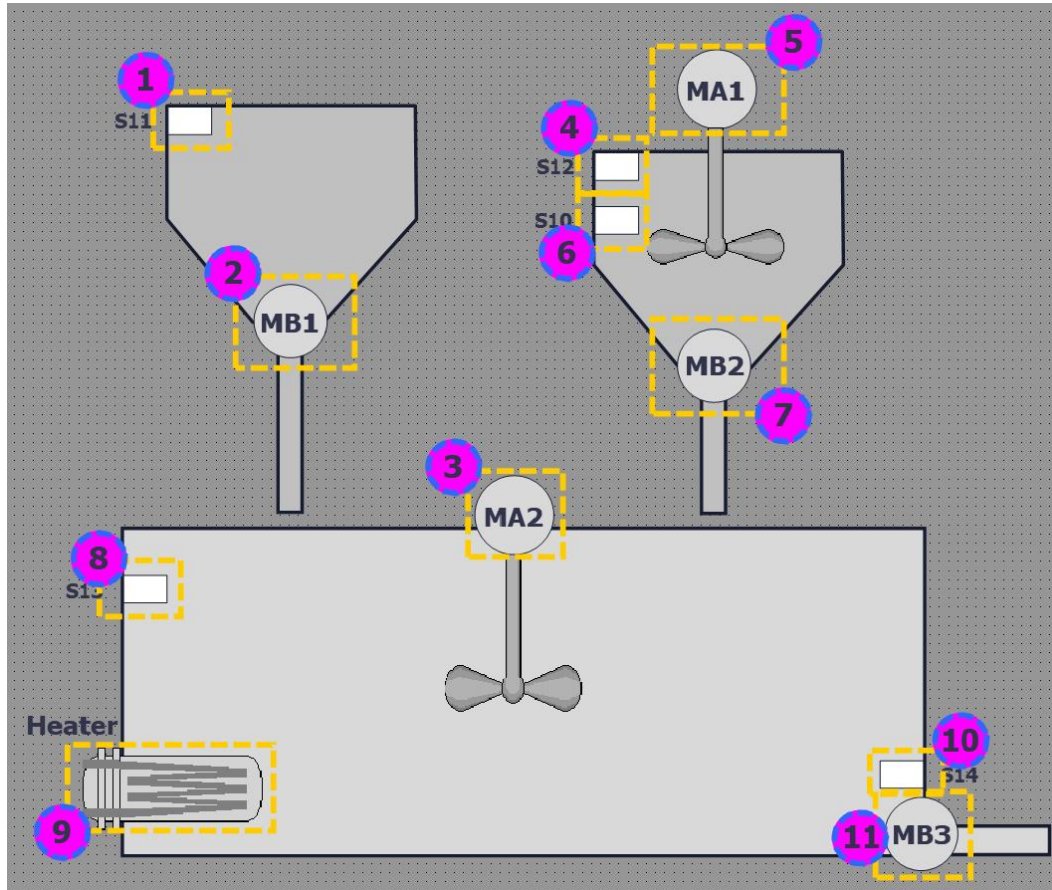
SYMBOL	TYPE	COMMENT	IN USE
S3	BOOL	PLC-Input	Read
S10	BOOL	PLC-Input	Read
S11	BOOL	PLC-Input	Read
S12	BOOL	PLC-Input	Read
S13	BOOL	PLC-Input	Read
S14	BOOL	PLC-Input	Read
S15	BOOL	PLC-Input	Read
-K3:DI_Bit_0	BOOL	PLC-Input	Read
-K3:DI_Bit_2	BOOL	PLC-Input	Read
Q5	BOOL	PLC-Output	Read
Q6	BOOL	PLC-Output	Read
P2	BOOL	PLC-Output	Read
P10	BOOL	PLC-Output	Read
P11	BOOL	PLC-Output	Read
P12	BOOL	PLC-Output	Read
P13	BOOL	PLC-Output	Read
P14	BOOL	PLC-Output	Read
MB1_is_on	BOOL	PLC-Variable	Read
MB1	BOOL	PLC-Variable	Write
MB2_is_on	BOOL	PLC-Variable	Read
MB2	BOOL	PLC-Variable	Write
MB3_is_on	BOOL	PLC-Variable	Read
MB3	BOOL	PLC-Variable	Write
MA1_CW	BOOL	PLC-Variable	Write
MA1_CCW	BOOL	PLC-Variable	Write
MA1_is_on	BOOL	PLC-Variable	Read



MA1_CW_ON	BOOL	PLC-Variable	Read
MA1_CCW_ON	BOOL	PLC-Variable	Read
MA2_CW	BOOL	PLC-Variable	Write
MA2_CCW	BOOL	PLC-Variable	Write
MA2_STOP	BOOL	PLC-Variable	Write
MA2_is_on	BOOL	PLC-Variable	Read
MA2_CCW_ON	BOOL	PLC-Variable	Read
MA2_CW_ON	BOOL	PLC-Variable	Read
Heat_is_on	BOOL	PLC-Variable	Read
Heater_ON	BOOL	PLC-Variable	Write
Heater_OFF	BOOL	PLC-Variable	Write
Set_point	REAL	PLC-Variable	Write /Read
MA2_actual_speed	DINT	PLC-Variable	Read
Temperature	REAL	PLC-Variable	Read
Error	BOOL	PLC-Variable	Read
Error_reset	BOOL	PLC-Variable	Write
Cycle_active	BOOL	PLC-Variable	Read
Automatic_start	BOOL	PLC-Variable	Write
Automatic_stop	BOOL	PLC-Variable	Write
Automatic_pause	BOOL	PLC-Variable	Write
Manual mode	BOOL	PLC-Variable	Read
Automatic mode	BOOL	PLC-Variable	Read
Pause_active	BOOL	PLC-Variable	Read
Set_count	INT	PLC-Variable	Write /Read
Remain_count	INT	PLC-Variable	Read
Step	INT	PLC-Variable	Read
Total_Step	INT	PLC-Variable	Read



MATERIAL AND MIXER



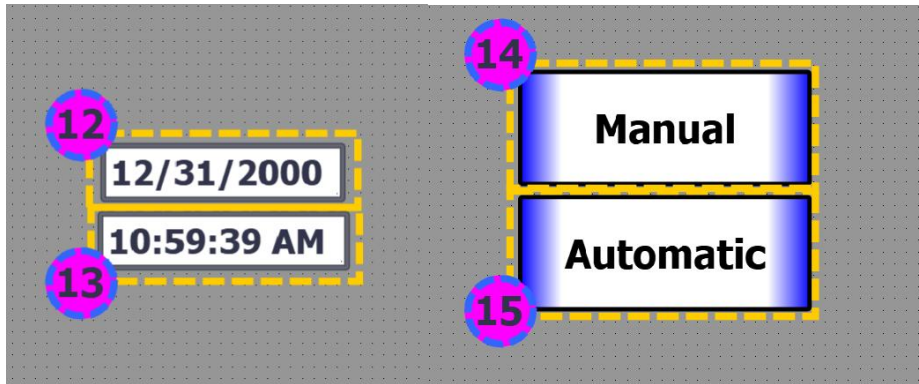
DESCRIPTION	SYMBOL LIBRARY	SYMBOL LIBRARY ITEM
Mixer	Mixer	Mixer Blade
Heater	Process heating	Evaporator

POSITION	VARIABLE	ACTION	COMMENT
1	S11	Background Control Colour	not actuated colour = WHITE actuated colour = GREEN
2	MB1_is_on	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN
3	MA2_is_on	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN
4	S12	Background Control Colour	not actuated colour = WHITE actuated colour = GREEN
5	MA1_is_on	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN



6	S10	Background Control Colour	not actuated actuated	colour = WHITE colour = GREEN
7	MB2_is_on	Background Control Colour	not actuated actuated	colour = GRAY colour = GREEN
8	S13	Background Control Colour	not actuated actuated	colour = WHITE colour = GREEN
9	Heater_is_on	Background Control Colour	not actuated actuated	colour = GRAY colour = RED
10	S14	Background Control Colour	not actuated actuated	colour = WHITE colour = GREEN
11	MB3_is_on	Background Control Colour	not actuated actuated	colour = GRAY colour = GREEN

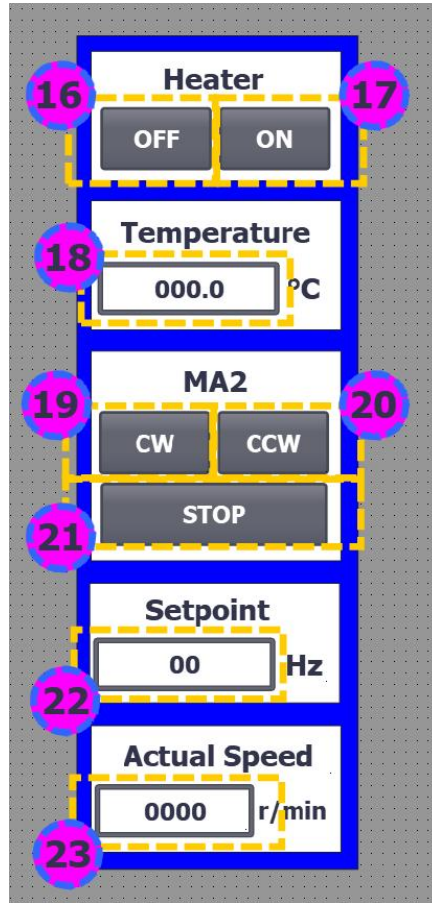
DATE DISPLAY



POSITION	VARIABLE	ACTION	COMMENT
12	-----	Date/Time field	Show date as input/output field
13	-----	Date/Time field	Show date as input/output field
14	Manual Mode	Background Control Colour	not actuated colour = WHITE/BLUE actuated colour = GREEN/BLUE
15	Automatic Mode	Background Control Colour	not actuated colour = WHITE/BLUE actuated colour = GREEN/BLU



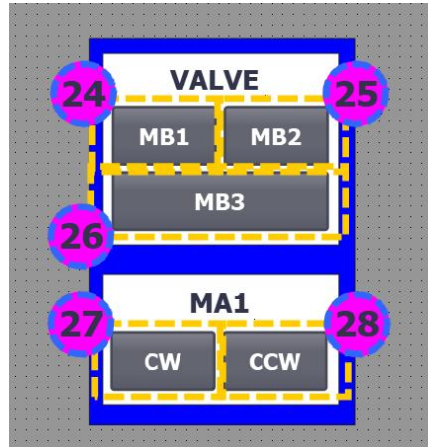
DETAILS CONTROL BOARD FOR MANUAL A



POSITION	VARIABLE	ACTION	COMMENT
16	Heater_ON	Button control	"State 1" while button is pressed
17	Heater_OFF	Button control	"State 1" while button is pressed
18	Temperature	Output field	Value: 0,0 to 100,0
19	MA2_CW	Button control	"State 1" while button is pressed
	MA2_CW_ON	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN
20	MA2_CCW	Button control	"State 1" while button is pressed
	MA2_CCW_ON	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN
21	MA2_STOP	Button control	"State 1" while button is pressed
22	Set_point	Input field	Value: 0 to 50
23	MA2_actual_speed	Output field	Value: 0 to 1440

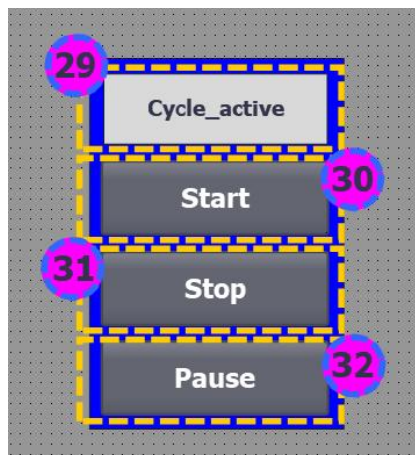


DETAILS CONTROL BOARDFOR MANUAL B



POSITION	VARIABLE	ACTION	COMMENT
24	MB1	Button control	"State 1" while button is pressed
25	MB2	Button control	"State 1" while button is pressed
26	MB3	Button control	"InvertBit" while button is pressed
27	MA1_CW	Button control	"State 1" while button is pressed
	MA1_CW_ON	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN
28	MA1_CCW	Button control	"State 1" while button is pressed
	MA1_CCW_ON	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN

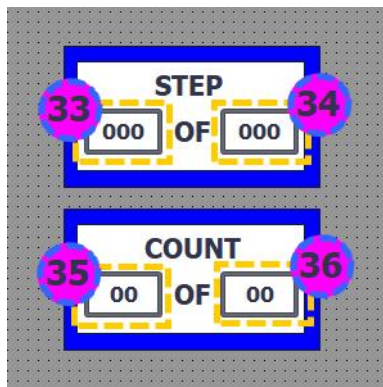
DETAILS CONTROL BOARDFOR AUTOMATIC





POSITION	VARIABLE	ACTION	COMMENT
29	Cycle_active	Background Control Colour	not actuated colour = WHITE/BLUE actuated colour = GREEN/BLUE
30	Automatic_Start	Button control	"State 1" while button is pressed
31	Automatic_Stop	Button control	"State 1" while button is pressed
32	Automatic_Pause	Button control	"State 1" while button is pressed
	Pause_active	Background Control Colour	not actuated colour = GRAY actuated colour = GREEN

DETAILS CONTROL BOARDFOR STEP

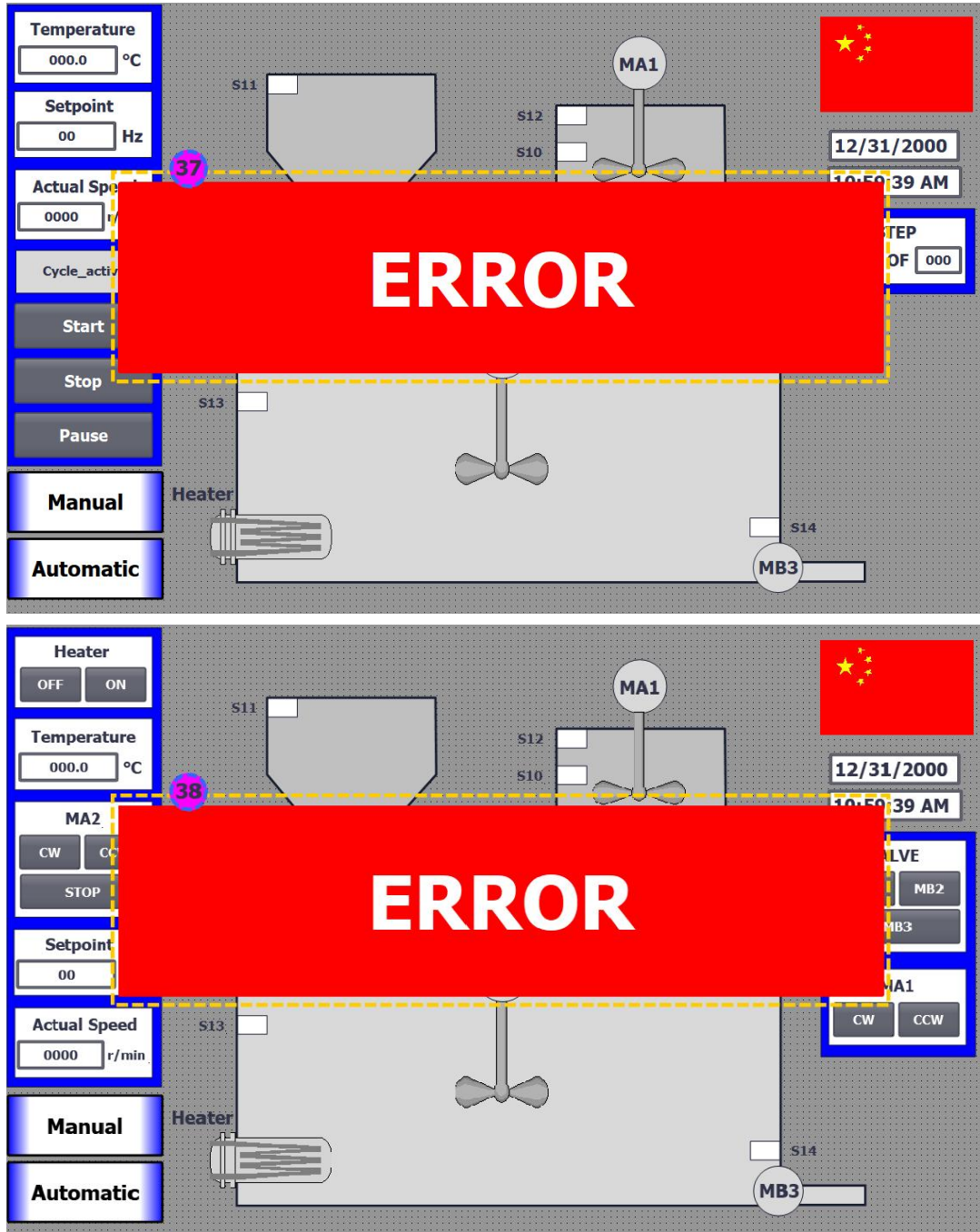


POSITION	VARIABLE	ACTION	COMMENT
33	Step	Output field	Value: 0 to 999
	-----	Background Control Colour	not actuated colour = WHITE actuated colour = RED/BLUE When $20 \leq \text{Step} \leq 25$, colour is RED When $35 \leq \text{Step} \leq 40$, colour is BLUE Other is NOT ACTIVE
34	Total_Step	Output field	Value: 0 to 999
	-----	Background Control Colour	not actuated colour = WHITE actuated colour = RED/BLUE When $20 \leq \text{Step} \leq 25$, colour is RED When $35 \leq \text{Step} \leq 40$, colour is BLUE Other is NOT ACTIVE
35	Set_count*	Input field	Value: 0 to 99
36	*Remain_count	Output field	Value: 0 to 99

*注: Remain:剩余 count:计数



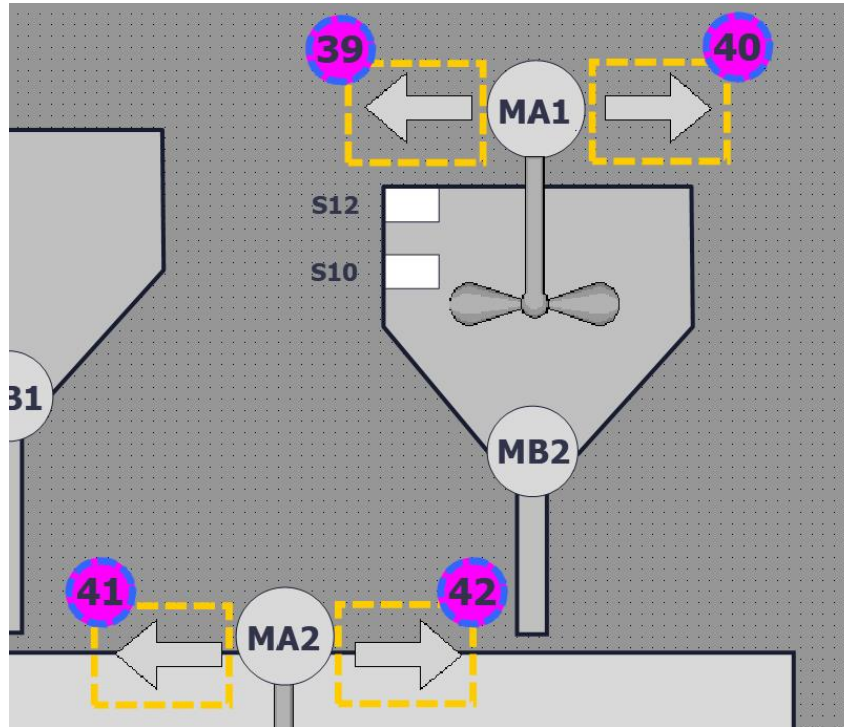
DETAILS ERROR



POSITION	VARIABLE	ACTION	COMMENT
37 / 38	Error	Visibility dynamic	not actuated visible = FALSE actuated visible = TRUE
	Error_Reset	Button control	"State 1" while button is pressed



DETAILSMOTOR DIRECTION



DESCRIPTION	SYMBOL LIBRARY	SYMBOL LIBRARY ITEM
Arrow	Arrows	Straight arrow 1

POSITION	VARIABLE	ACTION	COMMENT
39	MA1_CW_ON	Foreground Control Colour	Fill style: shaded not actuated colour = GRAY actuated colour = GREEN
40	MA1_CCW_ON	Foreground Control Colour	Fill style: shaded not actuated colour = GRAY actuated colour = GREEN
41	MA2_CW_ON	Foreground Control Colour	Fill style: shaded not actuated colour = GRAY actuated colour = GREEN
42	MA2_CCW_ON	Foreground Control Colour	Fill style: shaded not actuated colour = GRAY actuated colour = GREEN

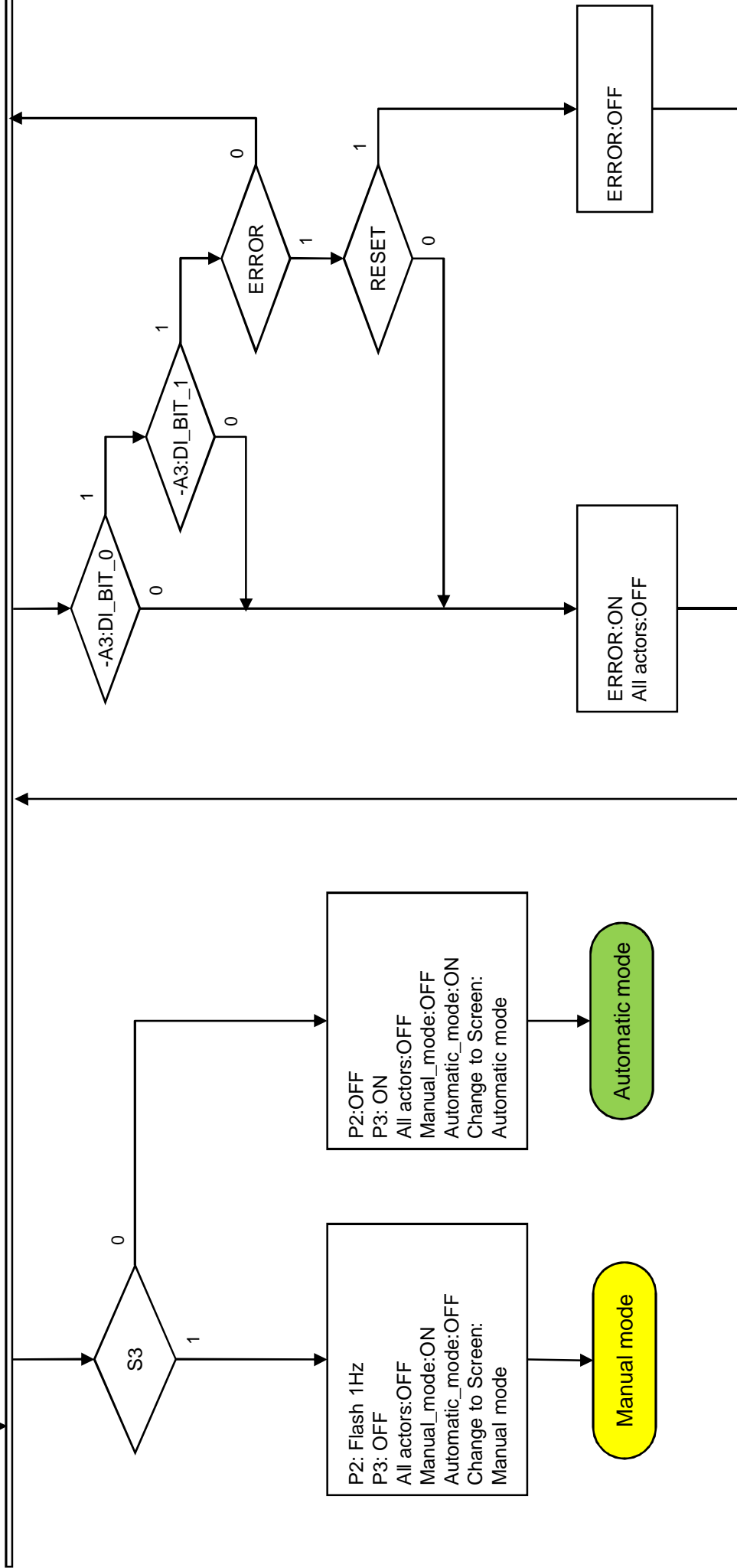
Power On

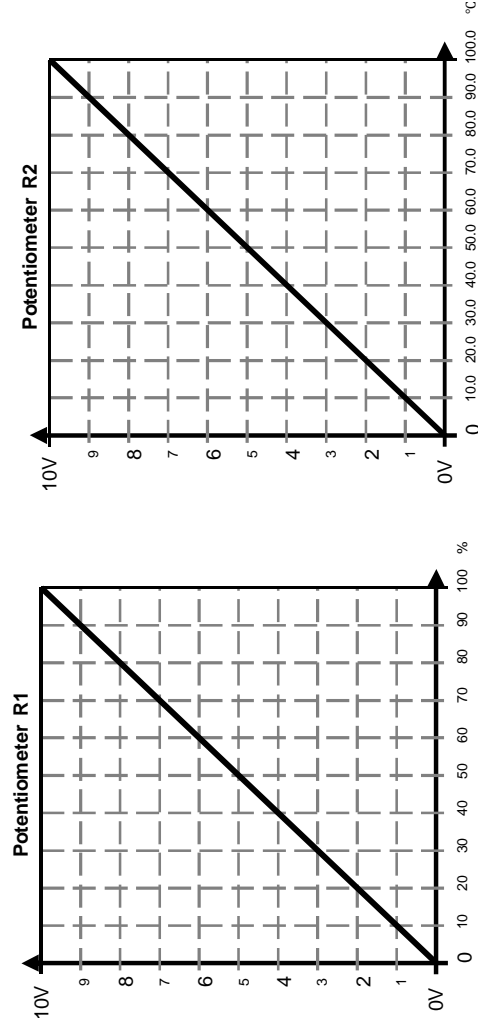
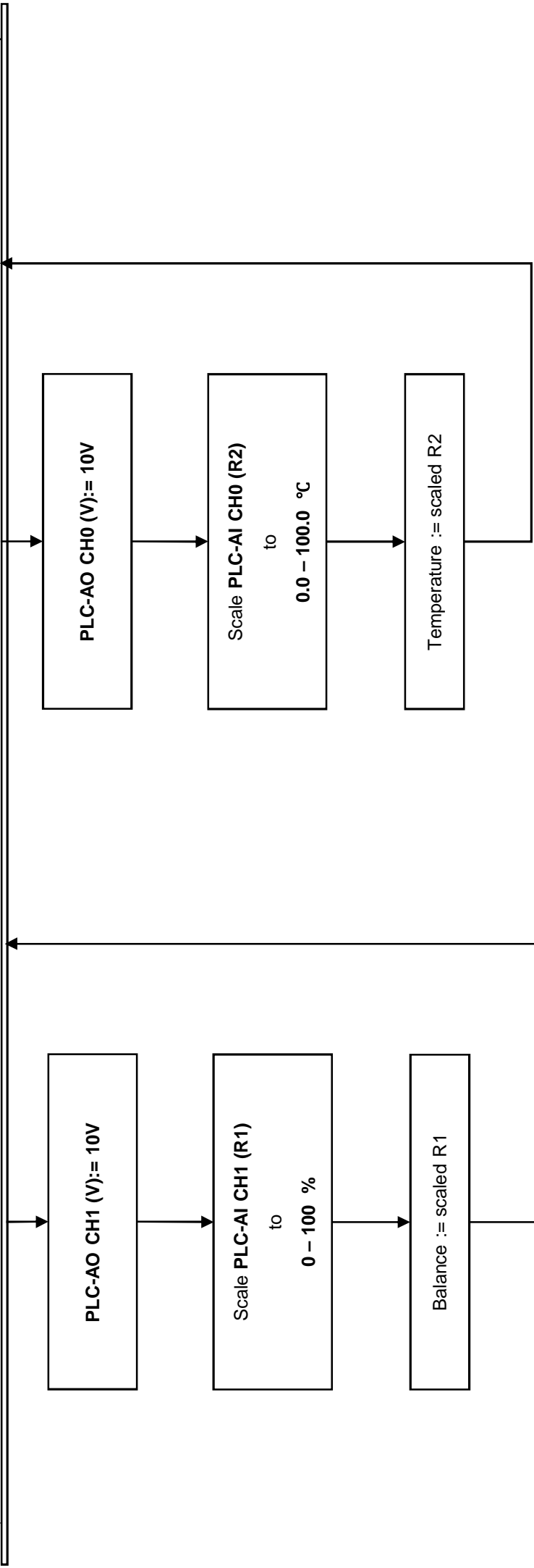
All actors: OFF

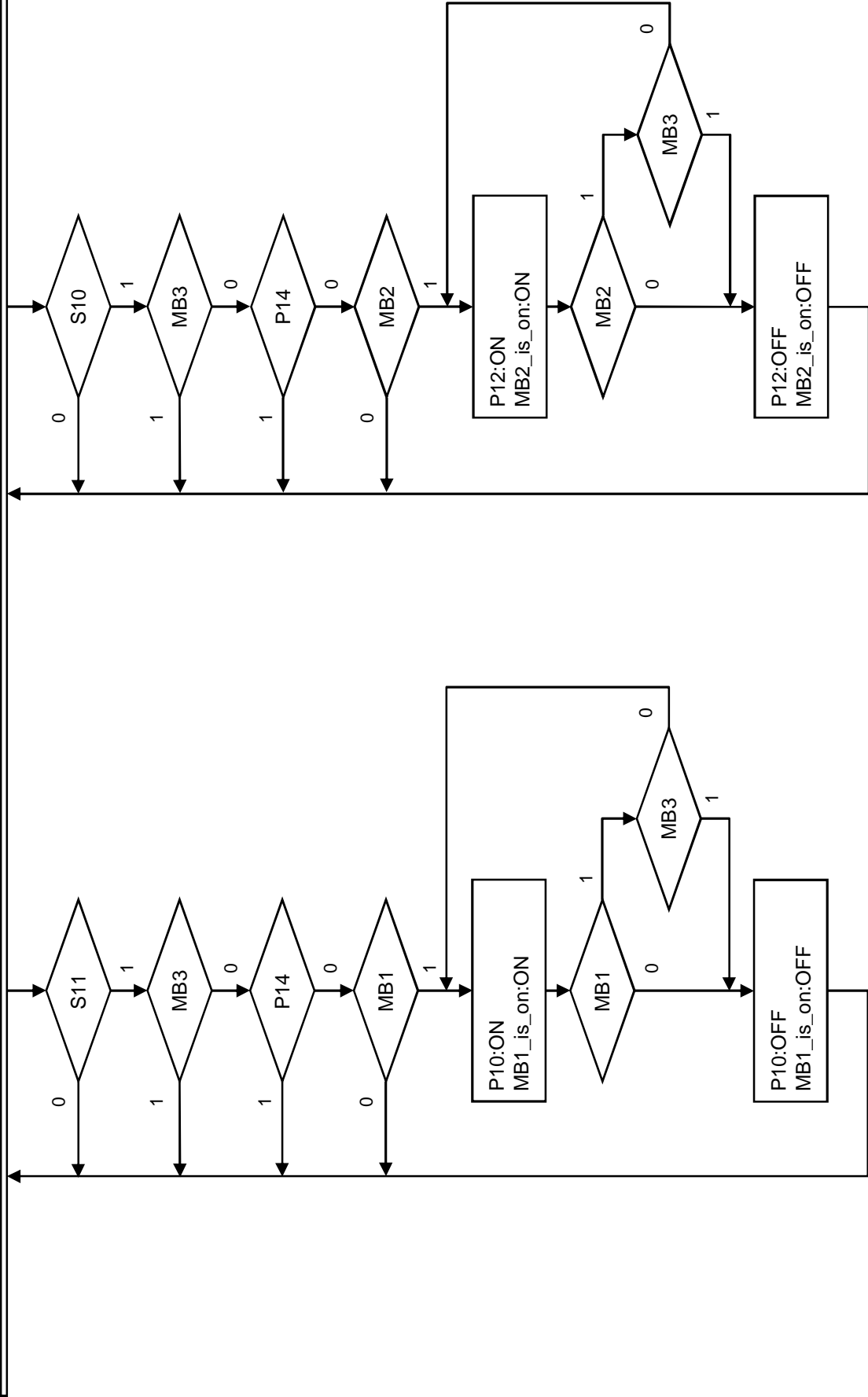
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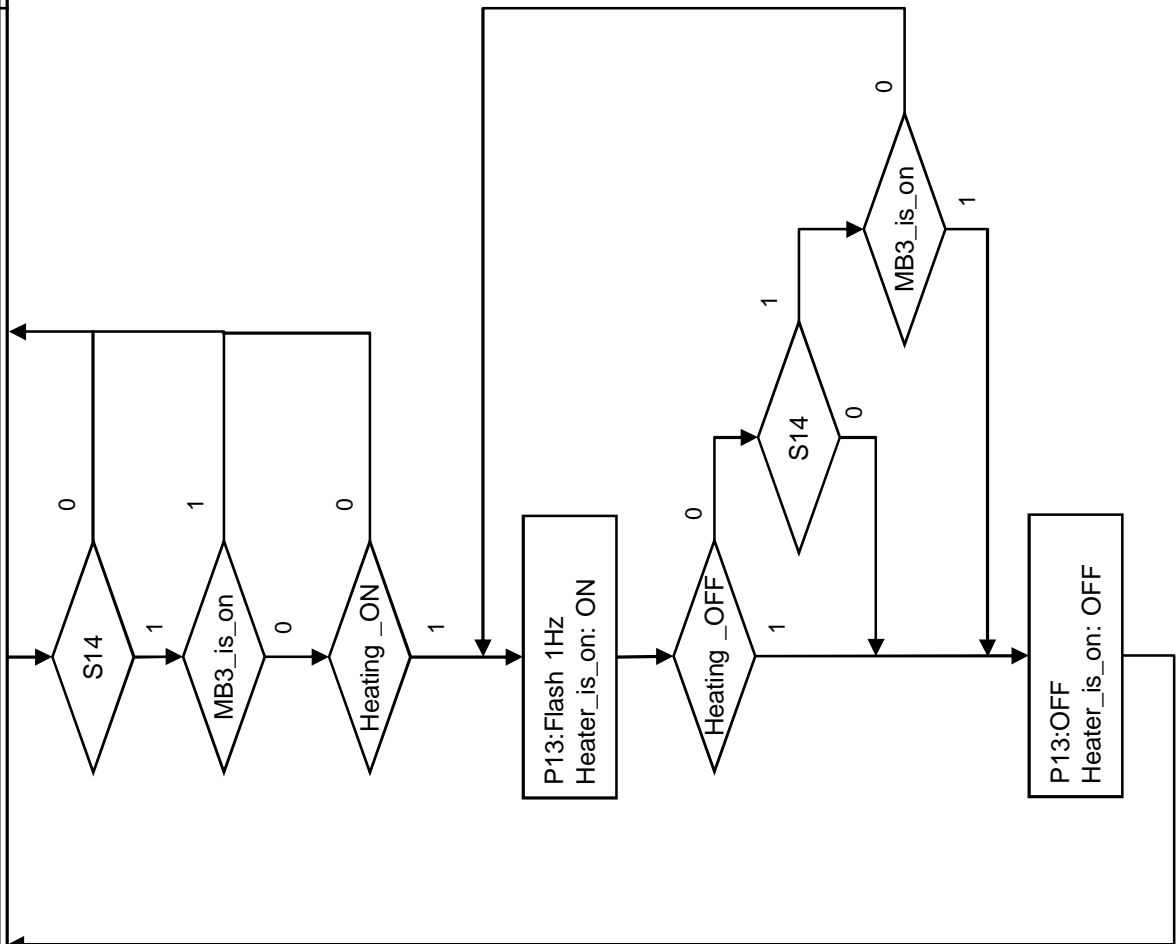
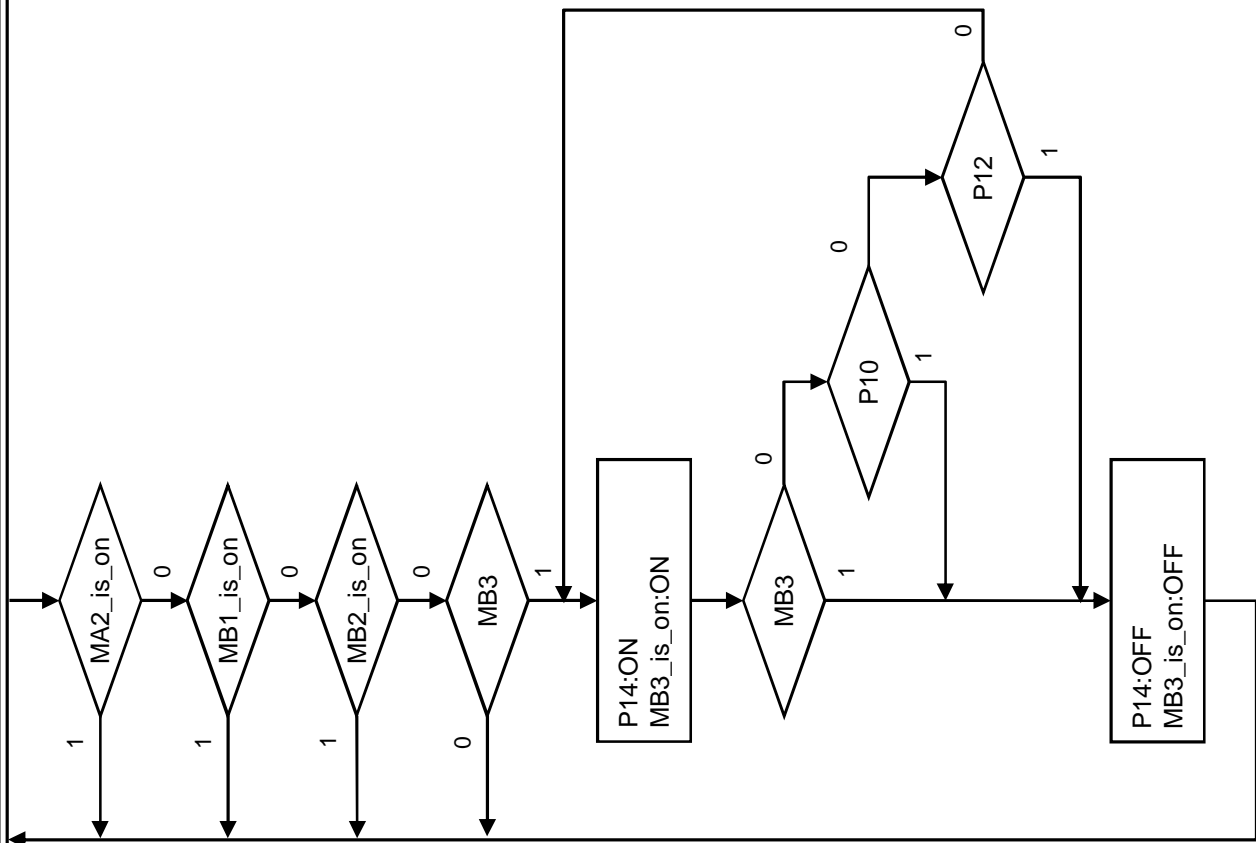
switches, push buttons or other devices **actuated / true = state "1"** on the function diagram
switches, push buttons or other devices **not actuated / not true = state "0"** on the function diagram

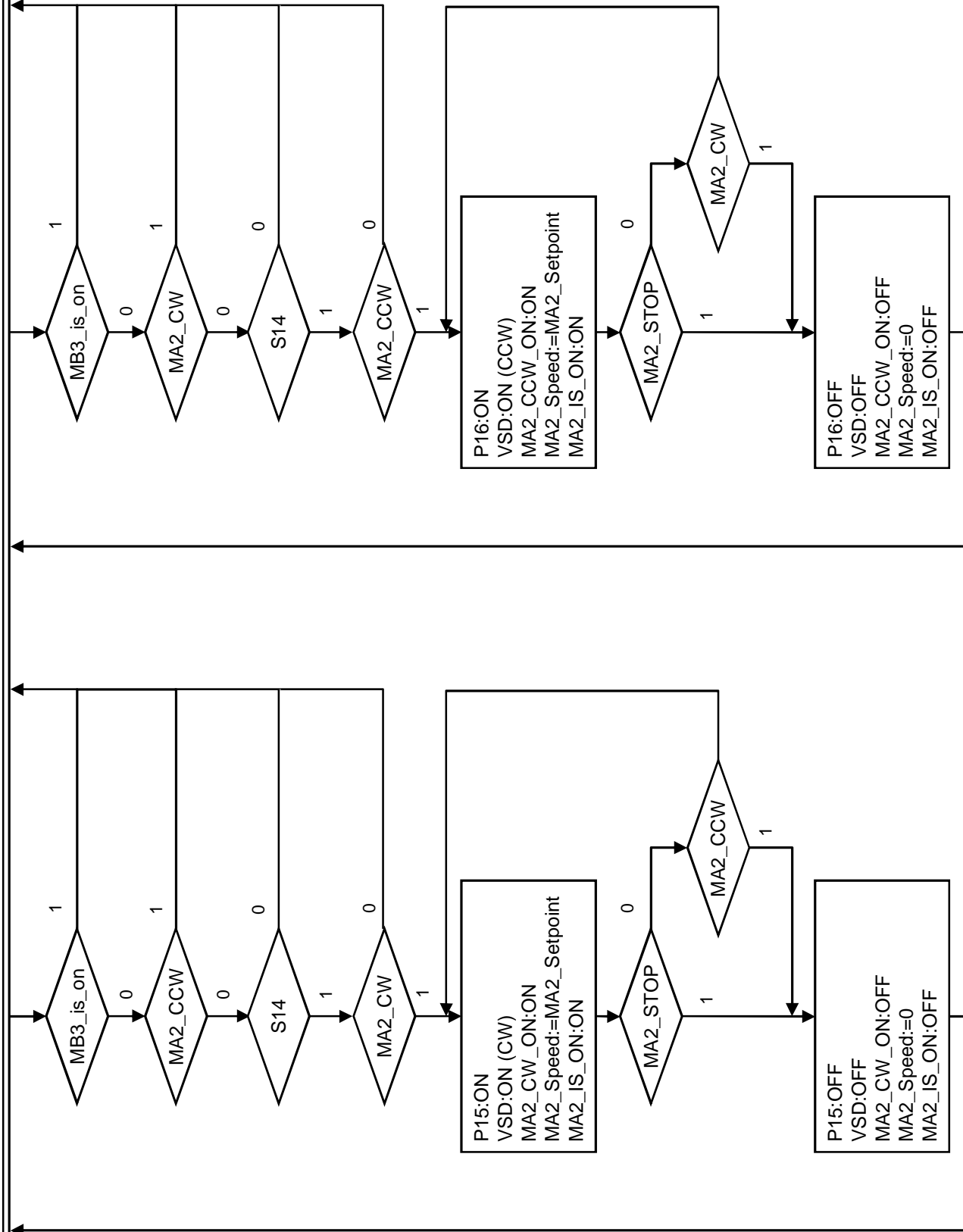
Page 2

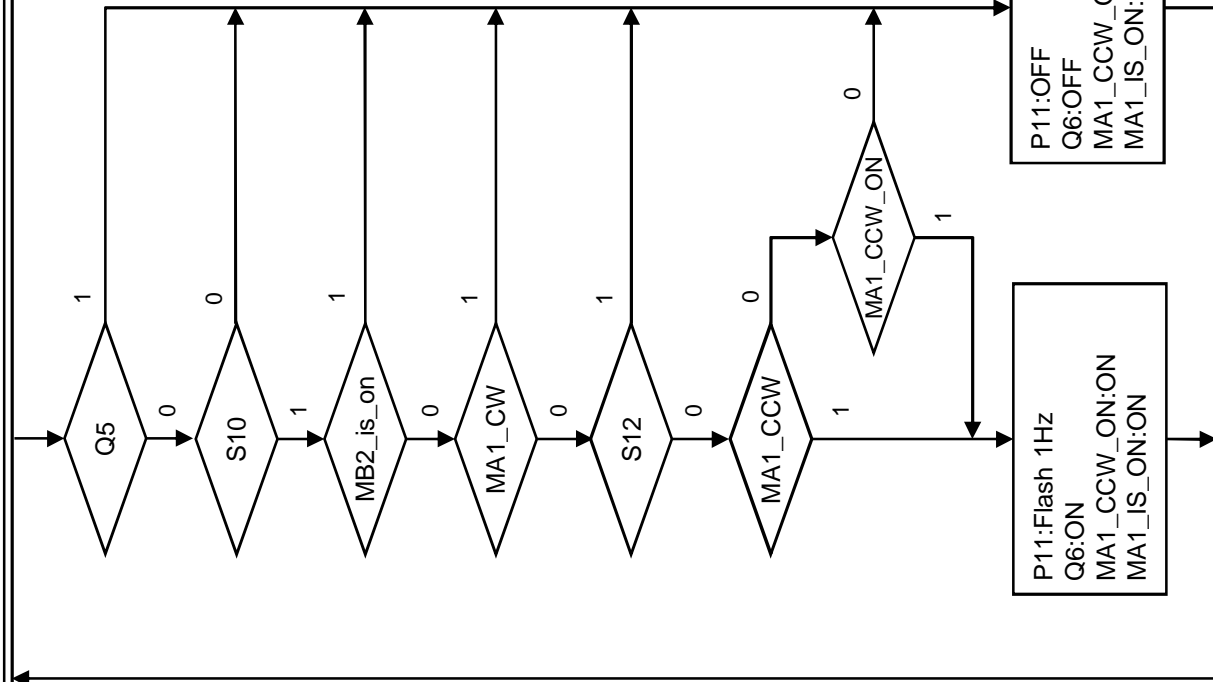
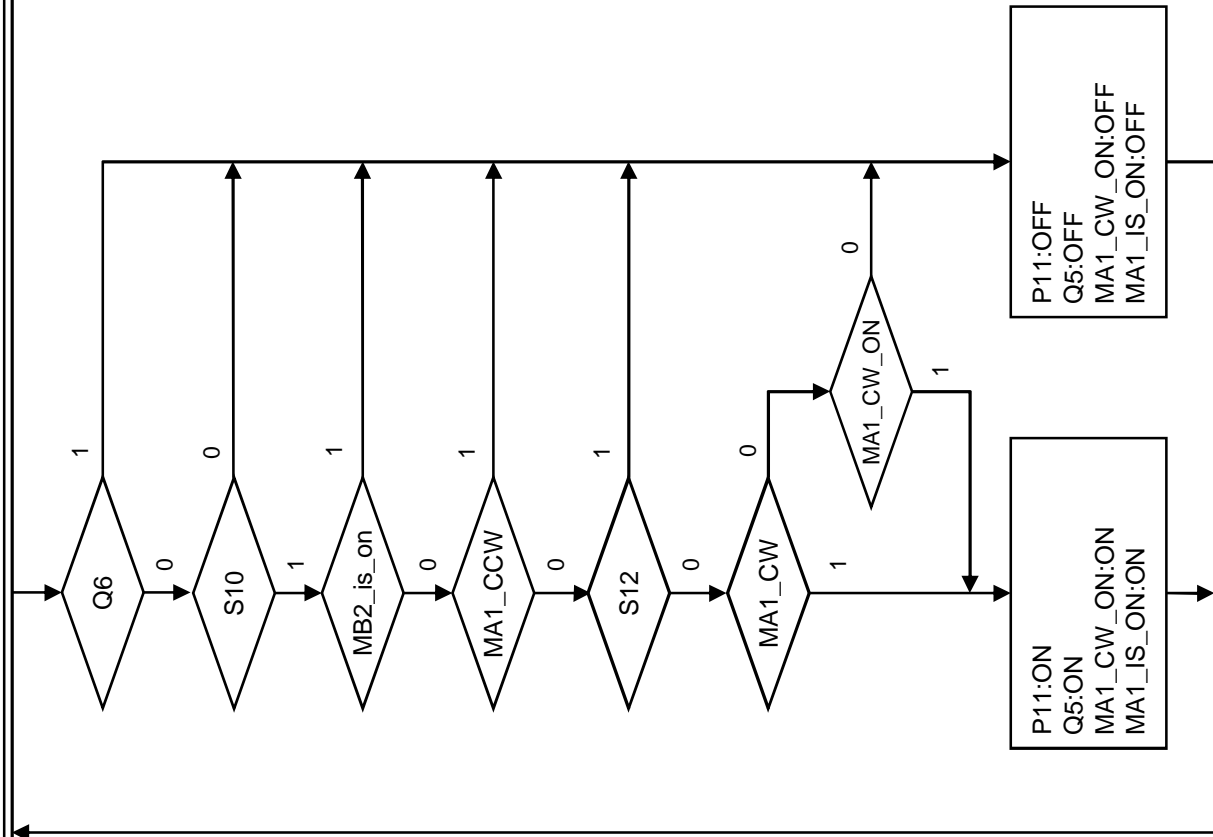


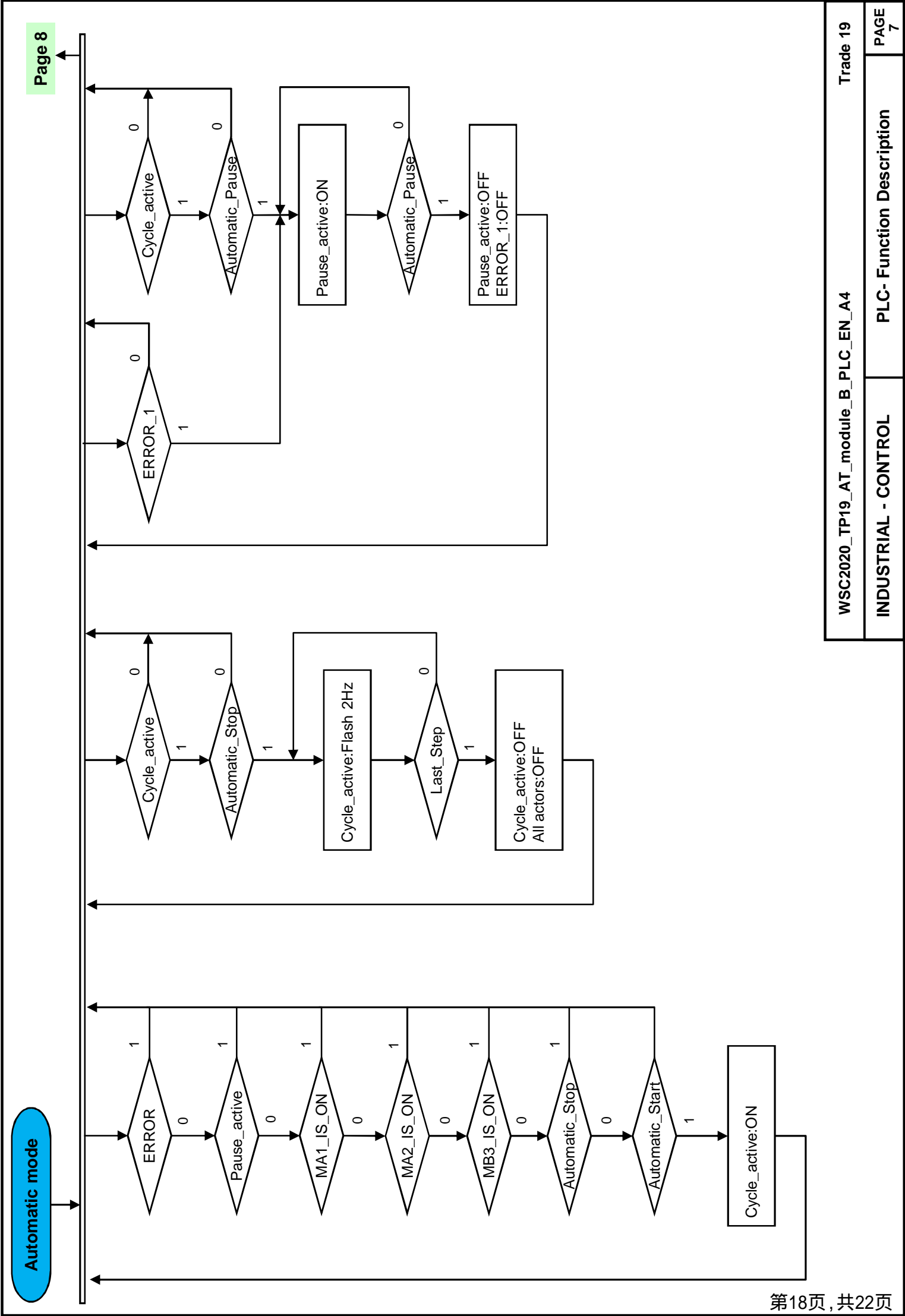


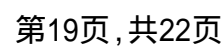


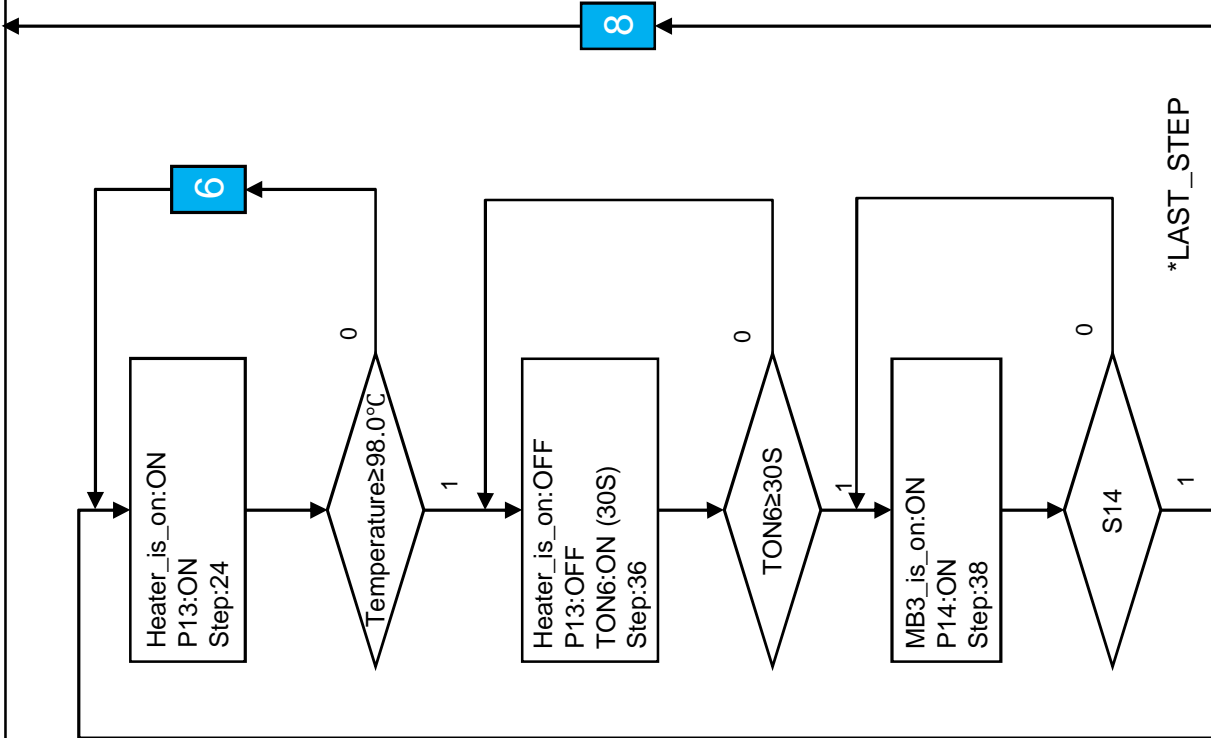
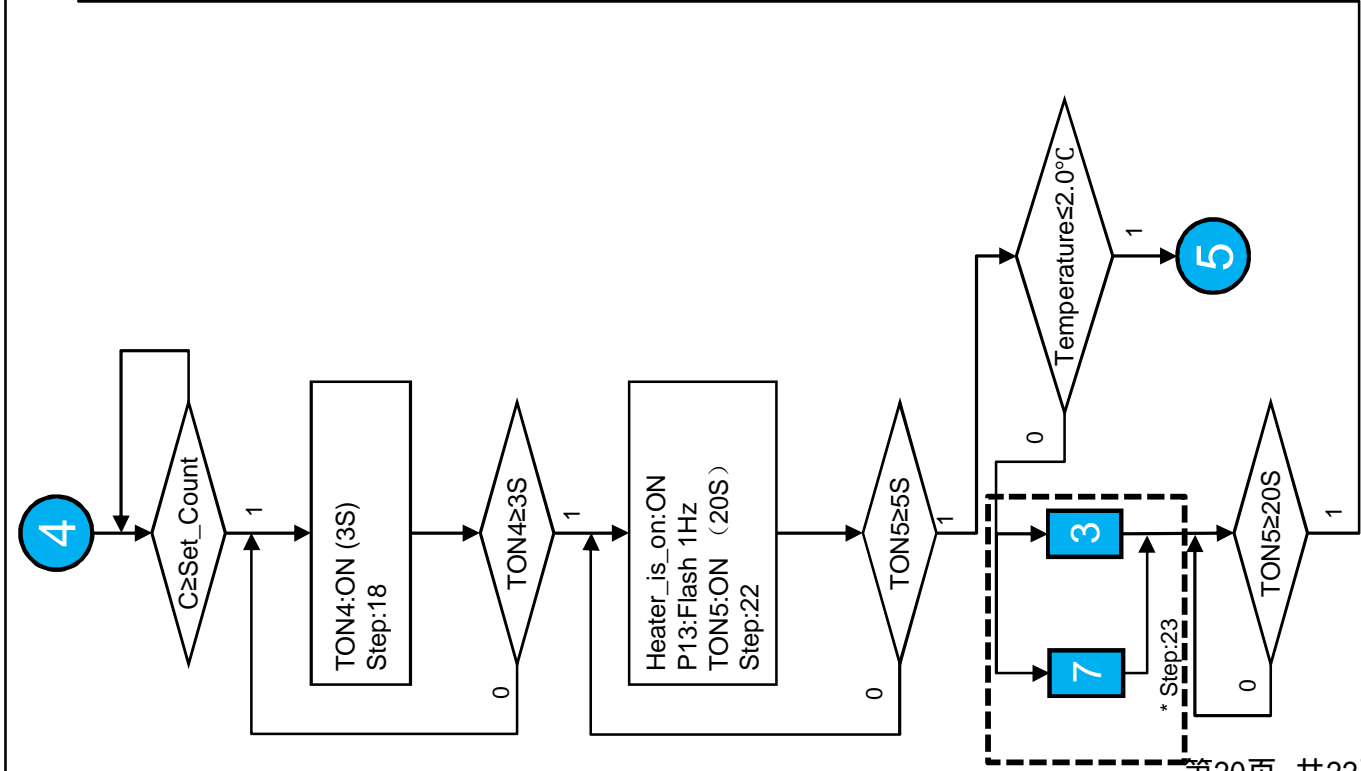












*注:
当运行Step23时, **3** 里面的Step显示无效, 只显示Step23

