

TEST PROJECT

MODULE D (PROGRAMMING)

INDUSTRIAL CONTROL

LKSNATIONAL_2021_HMI_PRE

Submitted by:

Name: Lodi Joyo Siswanto

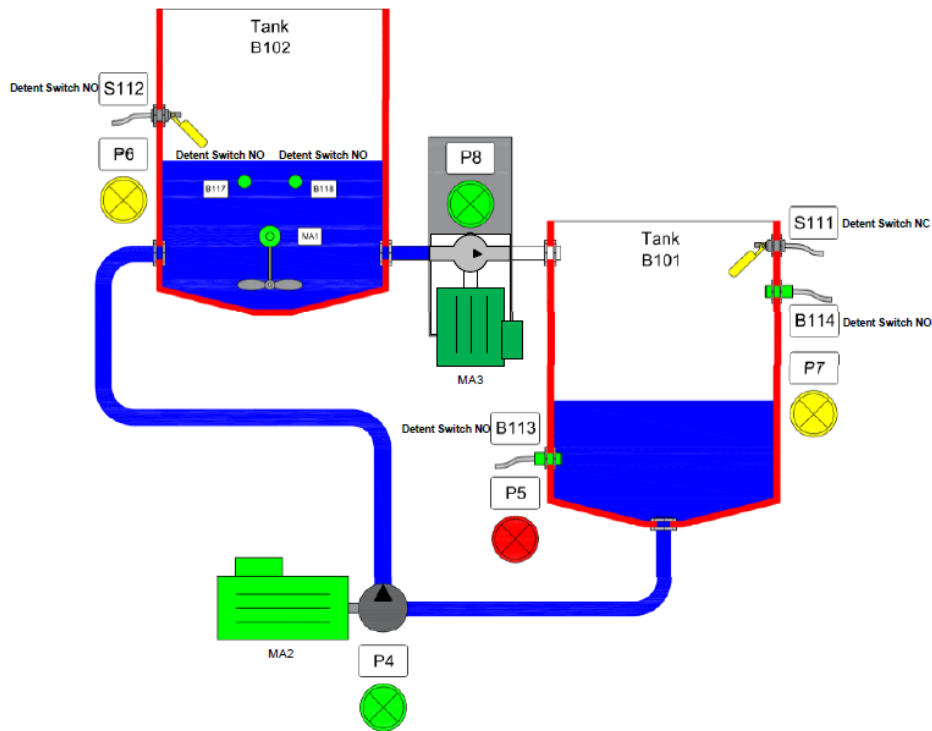
Member country or region: ID





Module D – Main project

With the attached mounting layout and its electrical diagrams it is intended to simulate the operation of the following **Water Control System**.



Legend :

MA1: Mixing motor

MA2: Motor pump 1

MA3: Motor pump 2

B113 : Tank B101 Empty

B114 : Tank B101 Half

S111 : Tank B101 Full

B117 : MA1 Left

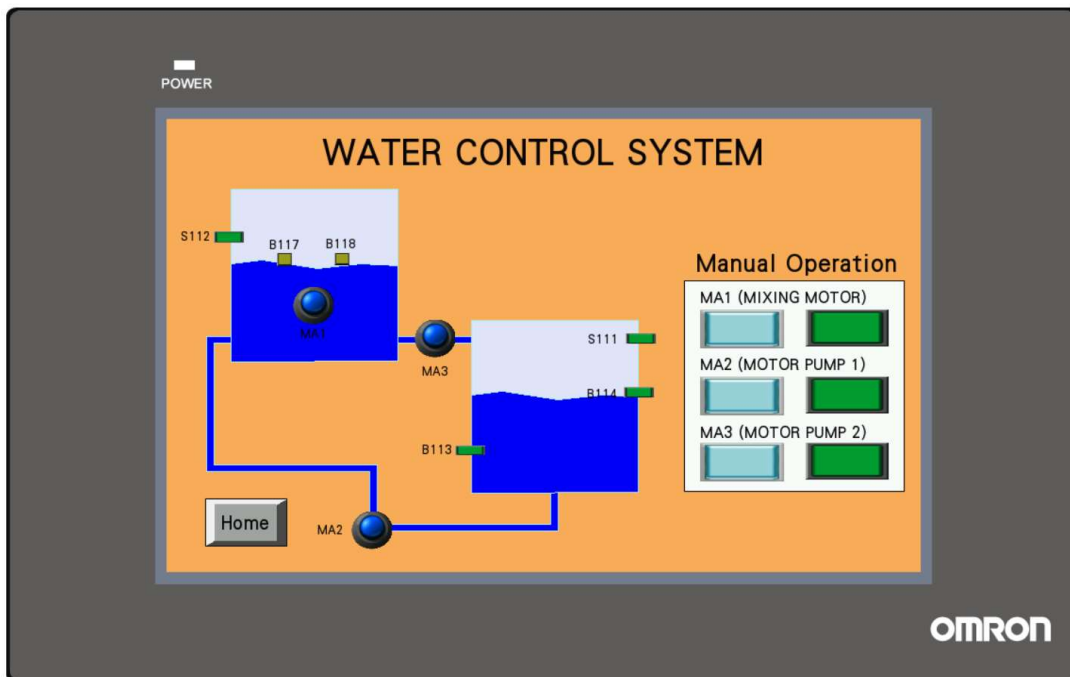
B118 : MA1 Right

S112 : Tank B102 Half

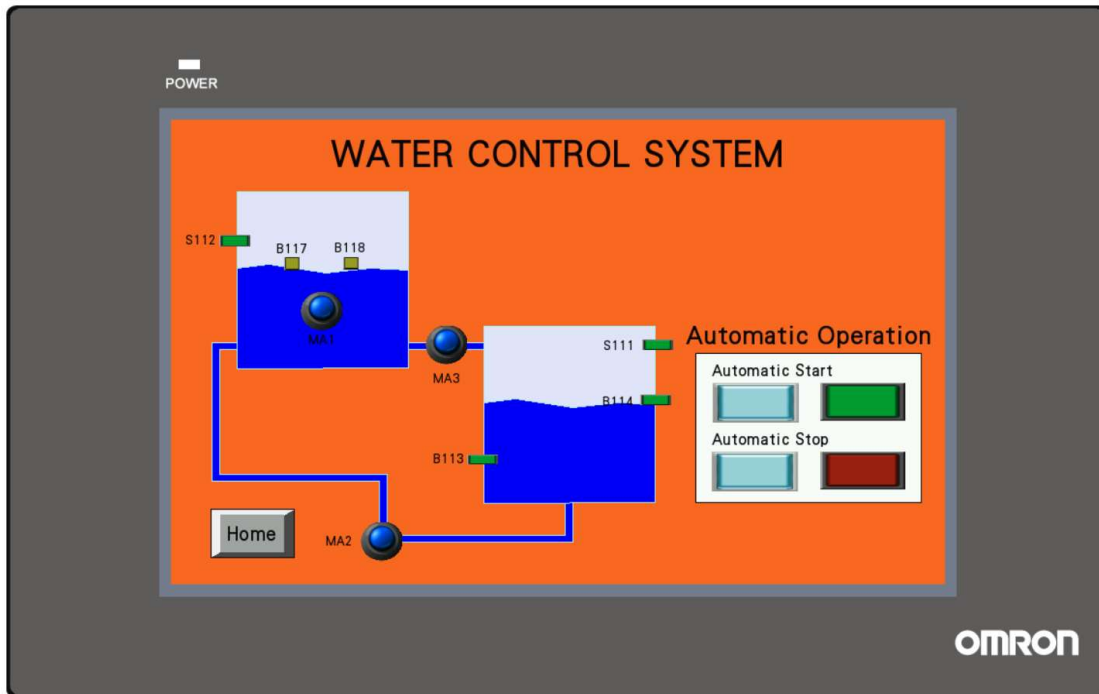
HMI – Screen “HOME”



HMI – Screen “Manual”



HMI – Screen “Automatic”



PLC Inputs/ Outputs

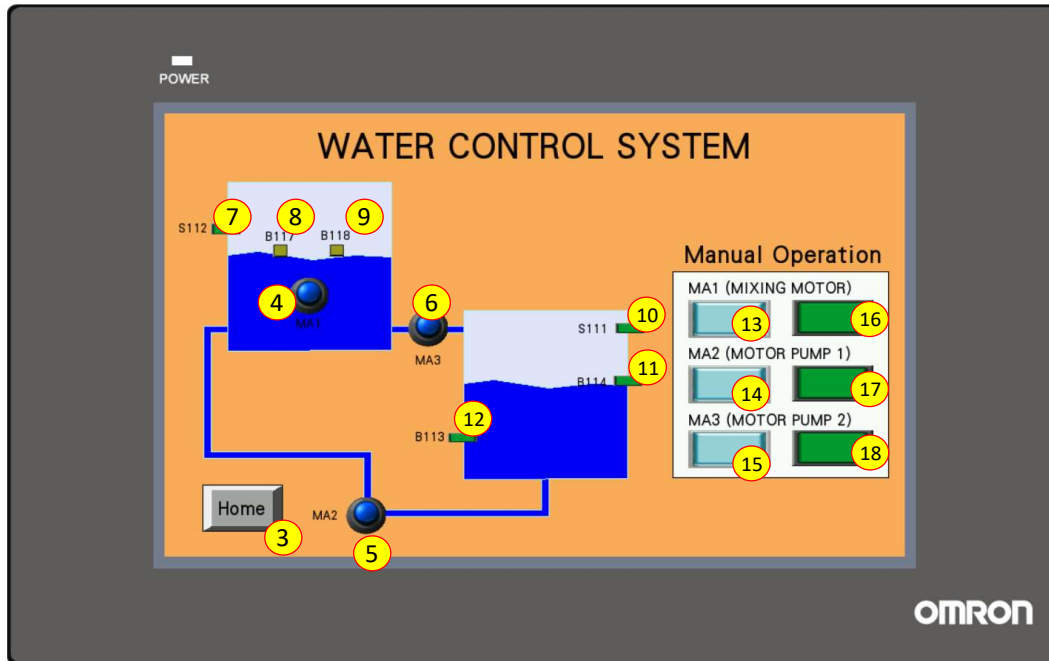
SYMBOL	TYPE	COMMENT
A2: DI_BIT0	BOOL	PLC - Input (A2)
SS1	BOOL	PLC - Input (A2)
S111	BOOL	PLC - Input (A2)
S112	BOOL	PLC - Input (A2)
B113	BOOL	PLC - Input (A2)
B114	BOOL	PLC - Input (A2)
B117	BOOL	PLC - Input (A2)
B118	BOOL	PLC - Input (A2)
MA1	BOOL	PLC - Output (A3)
MA2	BOOL	PLC - Output (A3)
MA3	BOOL	PLC - Output (A3)
PL2	BOOL	PLC - Output (A3)
PL3	BOOL	PLC - Output (A3)
Mode_Manual	BOOL	PLC - Variable
Mode_Automatic	BOOL	PLC - Variable
Cycle_active	BOOL	PLC - Variable
Cycle_Stop	BOOL	PLC - Variable
HMI_Button 0	BOOL	PLC - Variable
HMI_Button 1	BOOL	PLC - Variable
HMI_Button 2	BOOL	PLC - Variable
HMI_Button 3	BOOL	PLC - Variable
HMI_Button 4	BOOL	PLC - Variable

Details : Home Screen



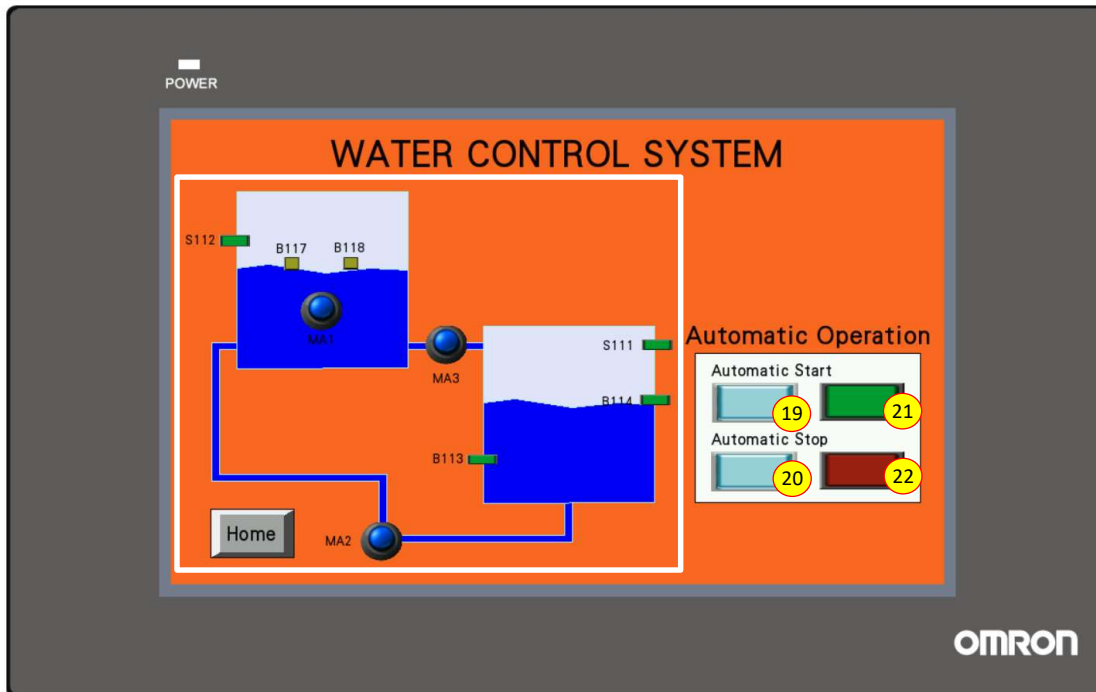
POSITION	VARIABLE	ACTION	COMMENT
1	---	Button Event	Active "Manual Screen"
2	---	Button Event	Active "Automatic Screen"

Details : Manual Screen



POSITION	VARIABLE	ACTION	COMMENT
3	---	Button Event	Active "Home Screen"
4	MA1	Background Control Colour	State "0" = colour = BLUE State "1" = colour = LIGHT BLUE
5	MA2	Background Control Colour	State "0" = colour = BLUE State "1" = colour = LIGHT BLUE
6	MA3	Background Control Colour	State "0" = colour = BLUE State "1" = colour = LIGHT BLUE
7	S112	Background Control Colour	State "0" = colour = GREEN State "1" = colour = LIGHT GREEN
8	B117	Background Control Colour	State "0" = colour = YELLOW State "1" = colour = LIGHT YELLOW
9	B118	Background Control Colour	State "0" = colour = YELLOW State "1" = colour = LIGHT YELLOW
10	S111	Background Control Colour	State "0" = colour = GREEN State "1" = colour = LIGHT GREEN
11	B114	Background Control Colour	State "0" = colour = GREEN State "1" = colour = LIGHT GREEN
12	B113	Background Control Colour	State "0" = colour = GREEN State "1" = colour = LIGHT GREEN
13	HMI_Button 2	Button Event	Set bit while key is pressed / Momentary
14	HMI_Button 3	Button Event	Set bit while key is pressed / Momentary
15	HMI_Button 4	Button Event	Set bit while key is pressed / Momentary
16	MA1	Background Control Colour	State "0" = colour = GREEN State "1" = colour = LIGHT GREEN
17	MA2	Background Control Colour	State "0" = colour = GREEN State "1" = colour = LIGHT GREEN
18	MA3	Background Control Colour	State "0" = colour = GREEN State "1" = colour = LIGHT GREEN

Details : Automatic Screen



The functions from the drawing of the Screen Automatic are the same from the drawing of the Screen Manual with the exception of the things that are outside the White square in the image.

POSITION	VARIABLE	ACTION	COMMENT
19	HMI_Button 0	Button Event	Set bit while key is pressed / Momentary
20	HMI_Button 1	Button Event	Set bit while key is pressed / Momentary
21	Cycle_Active	Background Control Colour	State "0 " = colour = GREEN State "1 " = colour = LIGHT GREEN
22	Cycle_Active	Background Control Colour	State "1 " = colour = RED State "0 " = colour = LIGHT RED

PROGRAMMING INDUSTRIAL CONTROL

LKSNATIONAL_2021_Programming_PRE

Submitted by :
Name : Lodi Joyo Siswanto
Member country or region : ID

Nama : _____
Provinsi : _____



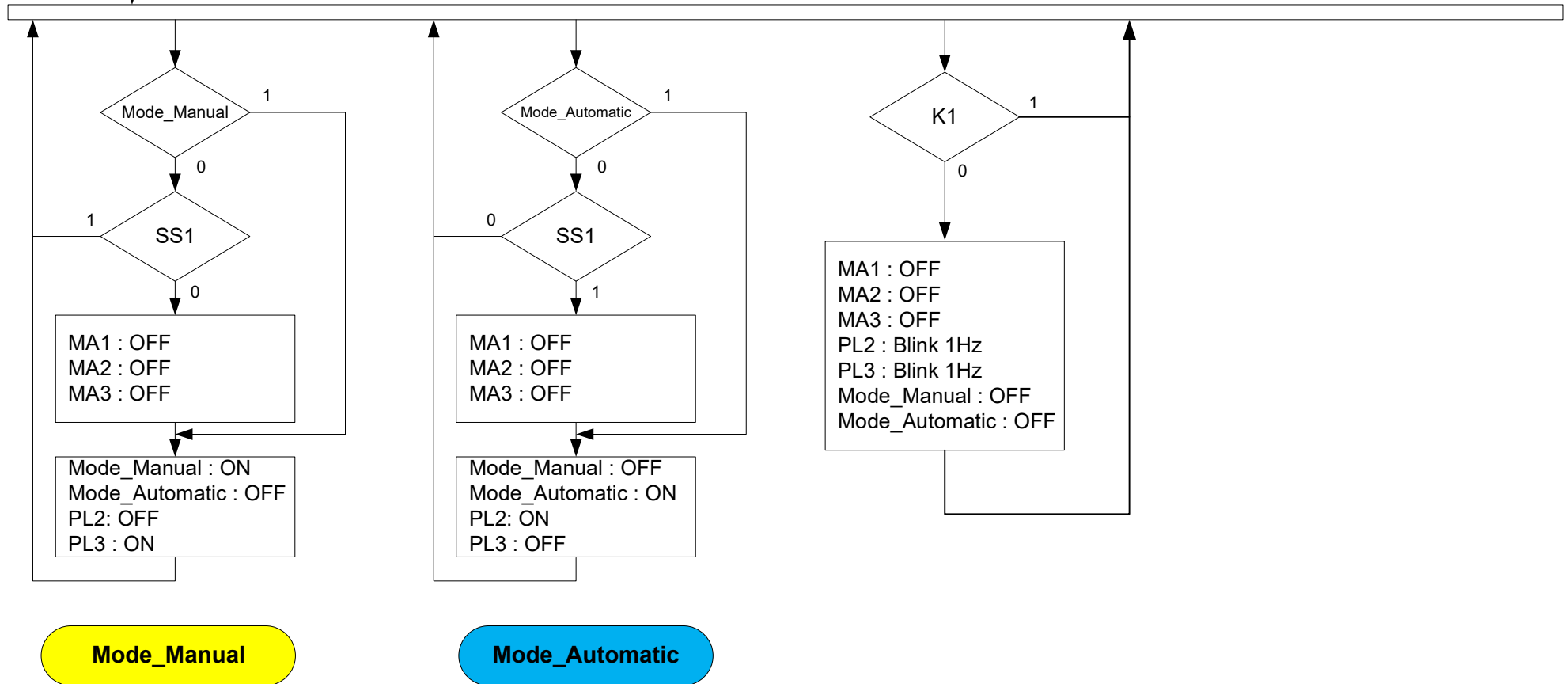
Power On

All actuators : OFF

Note :

Switches, push buttons or other devices actuated / true = state "1" on the function diagram

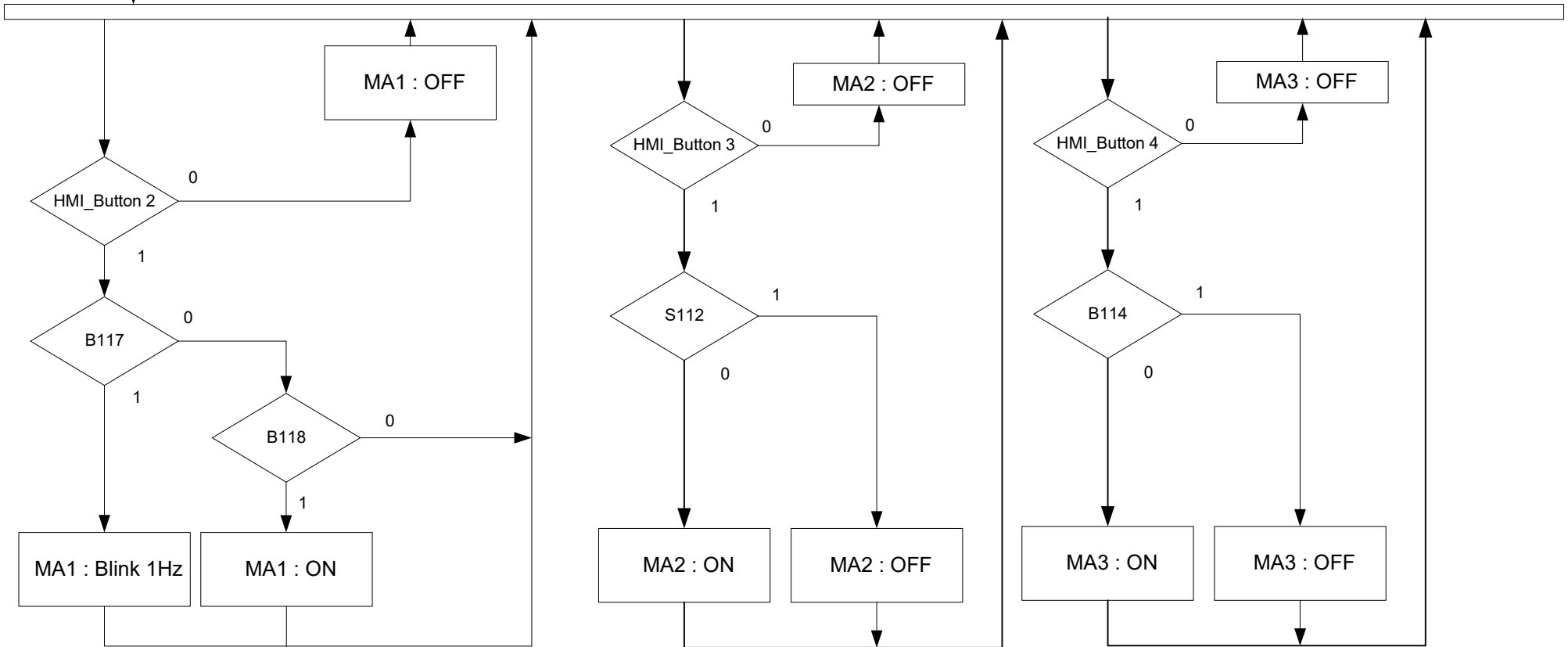
Switches, push buttons or other devices not actuated / false = state "0" on the function diagram



Mode_Manual

Mode_Automatic

Mode_Manual



Mode_Automatic

