Program information

Author : Spiros

Project name : Ice Machine

Version : 0.1

Module : SR3B261BD	XT2 : SR3XT43BD
Cycle time in the module : 7 x 2 ms WATCHDOG action : Error Type of Hardware Input Filtering : Slow (3ms) Locking of module front panel Date format : dd/mm/yyyy Daylight Saving Time change activated Zone : Europe Change to Daylight Saving Time : March, Last Sunday Return to winter time : October, Last Sunday	Type of inputs : Input IP : 0-10 V Input IQ : PT100 Type of outputs : Output OF : Analog Output OG : Analog Analog output ramp : Output OF : 1 s Output OG : 1 s Frequency of PWM outputs : Not Applicable

Program diagram

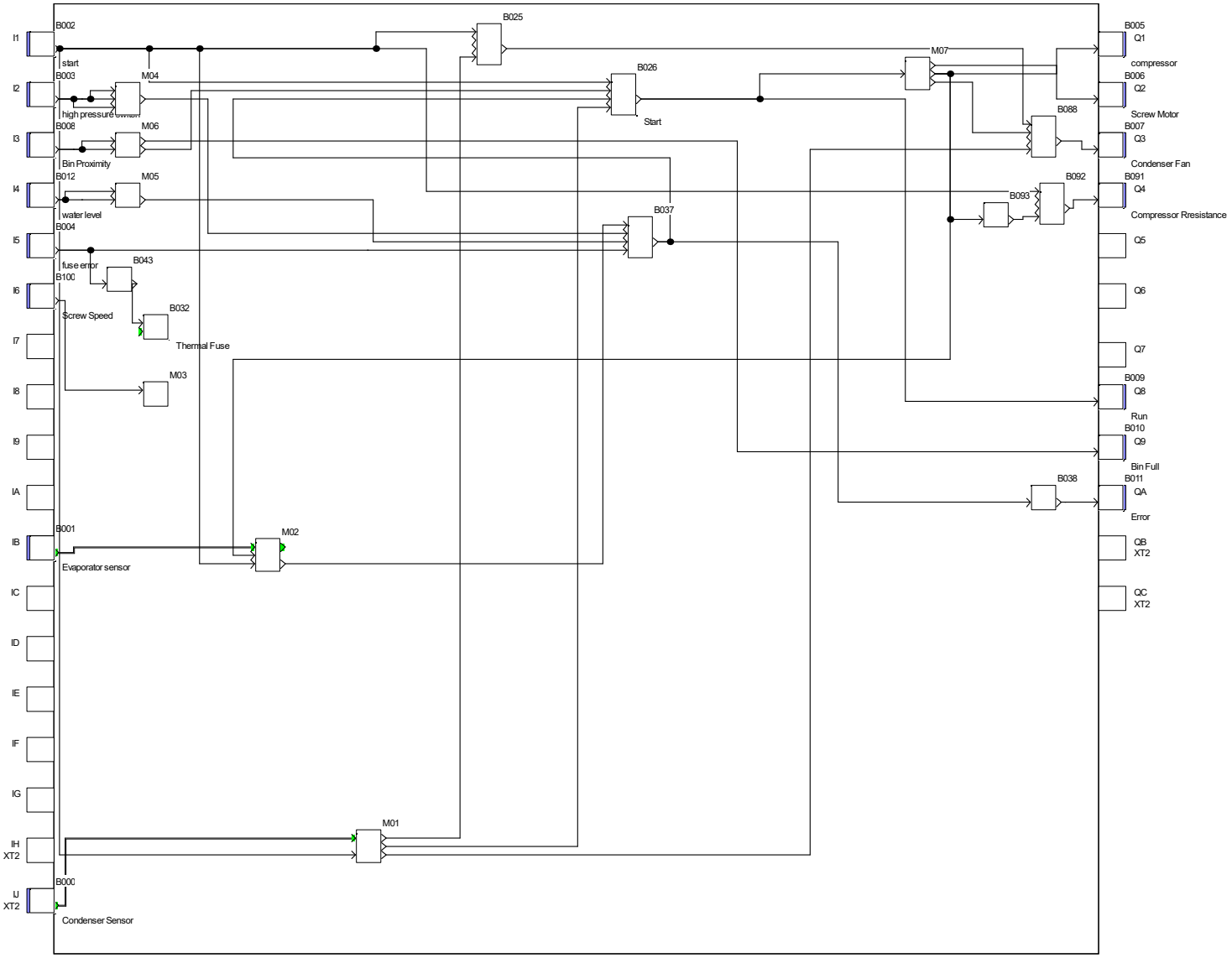


Diagram of the macro "cond - condenser"

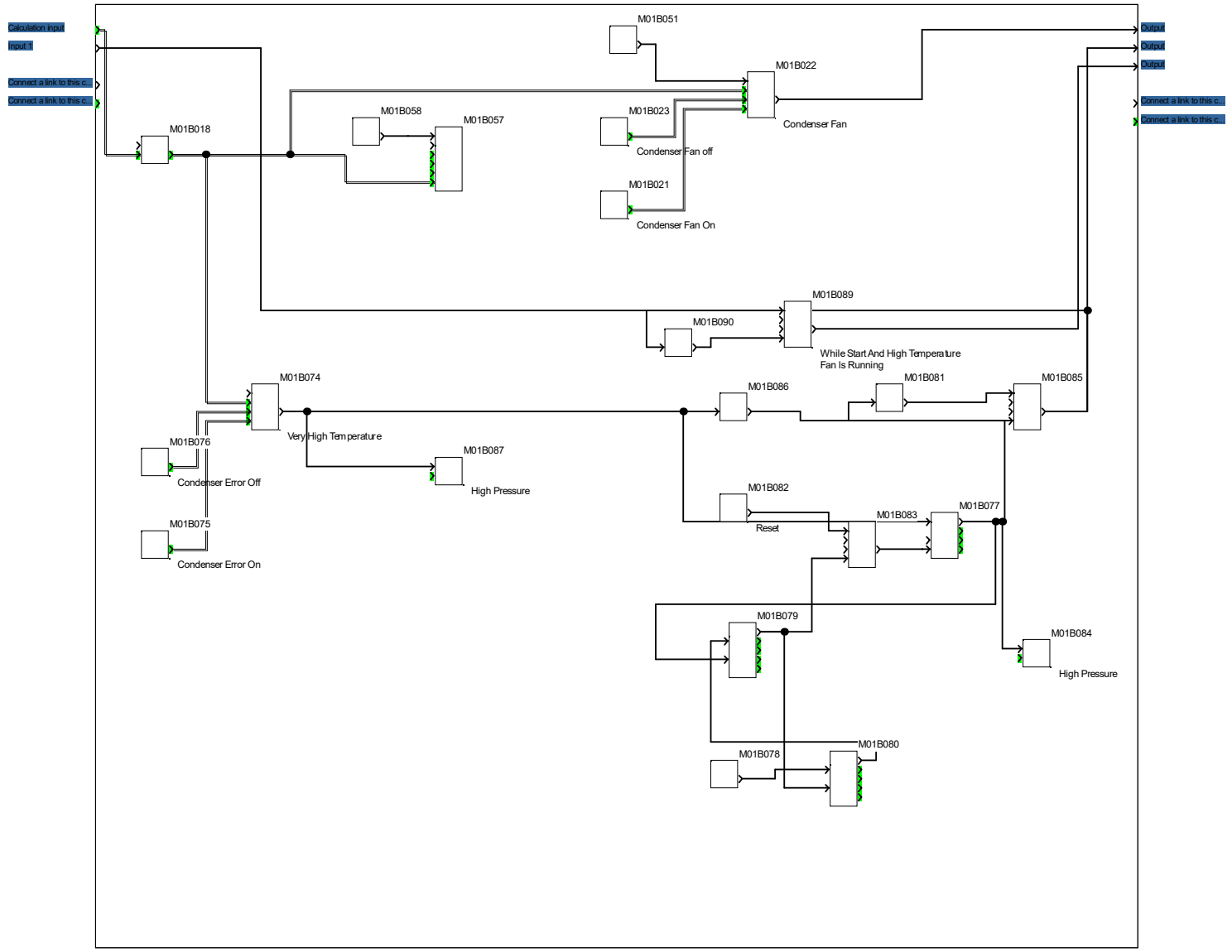


Diagram of the macro "evap - Evaporator"

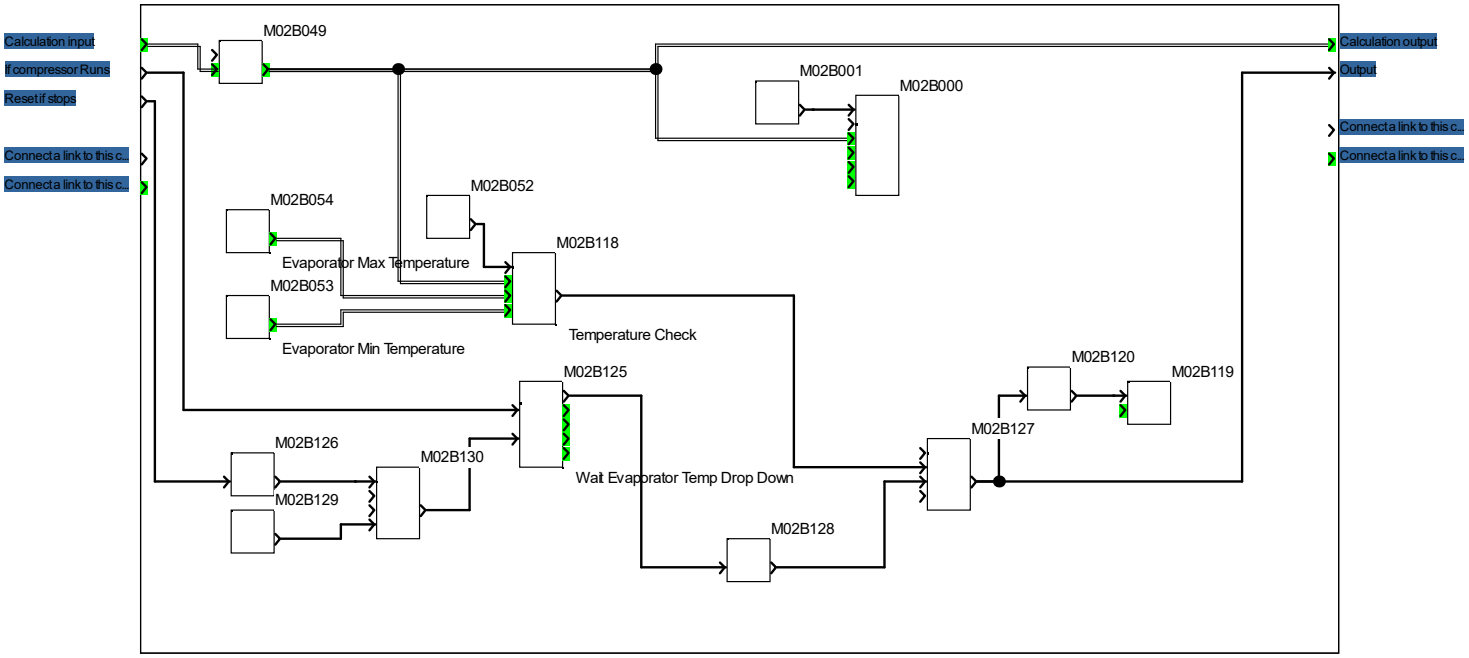


Diagram of the macro "screw - Screw Speed"

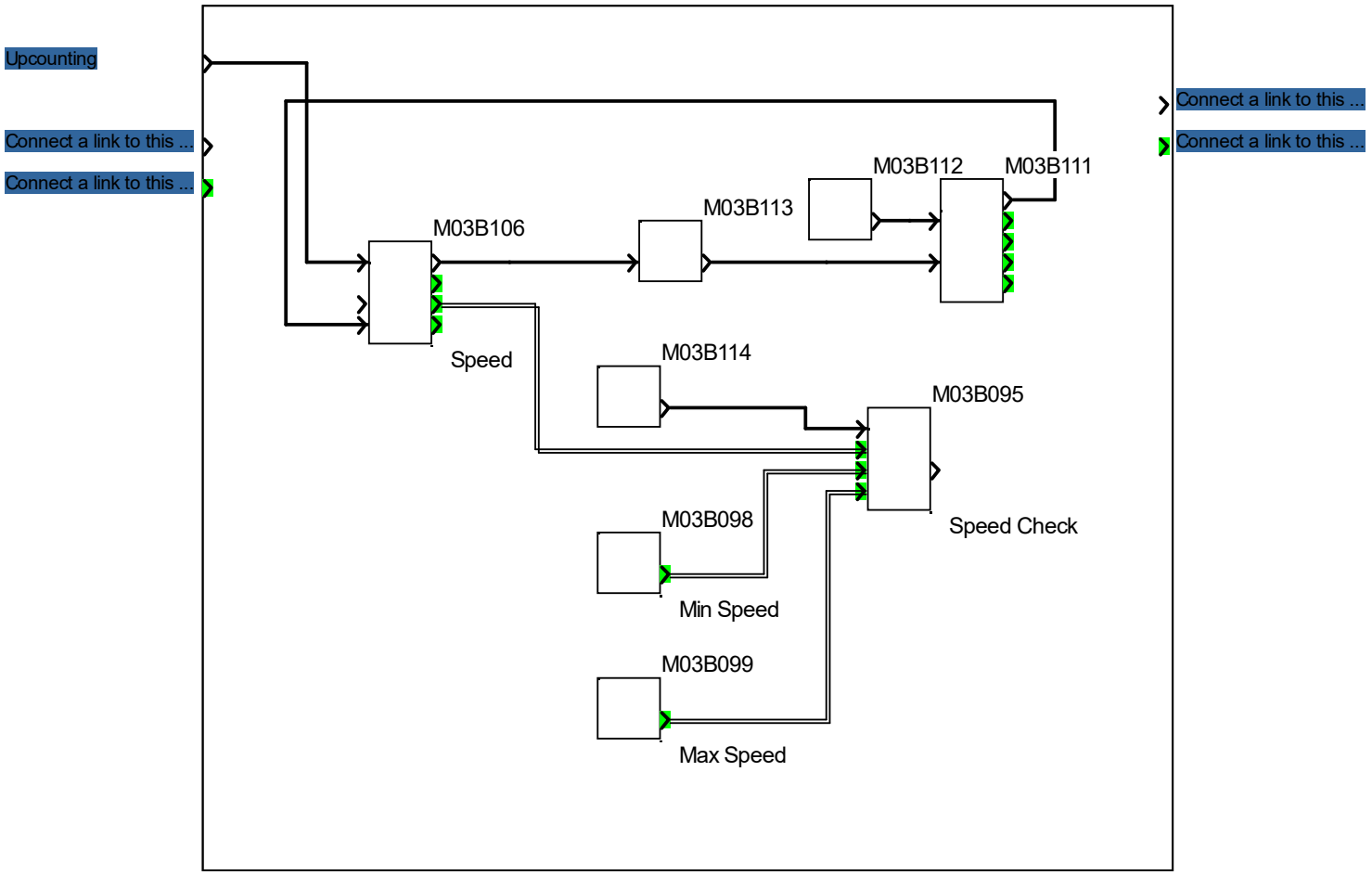


Diagram of the macro "press - High Pressure"

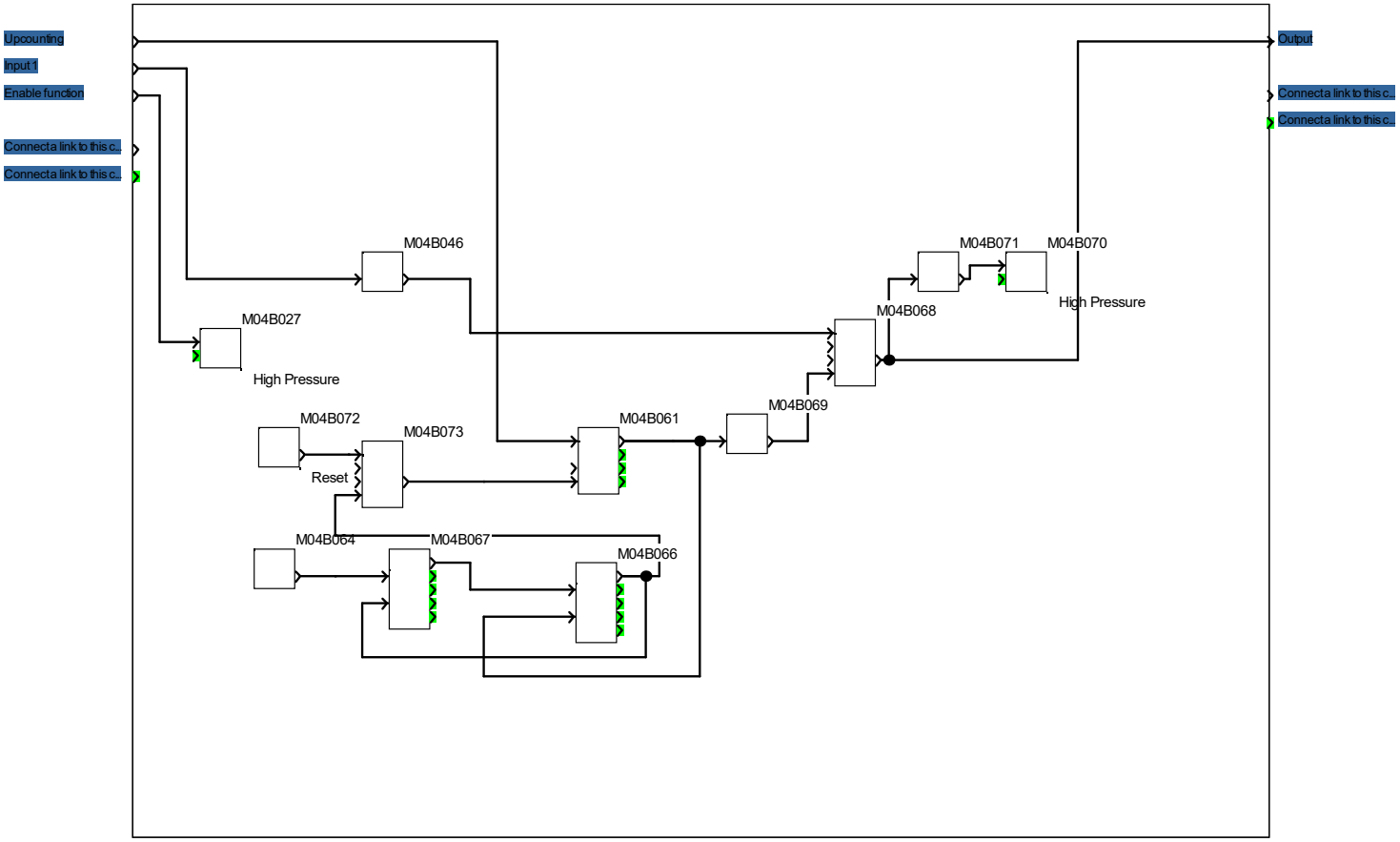


Diagram of the macro "water - Water Level"

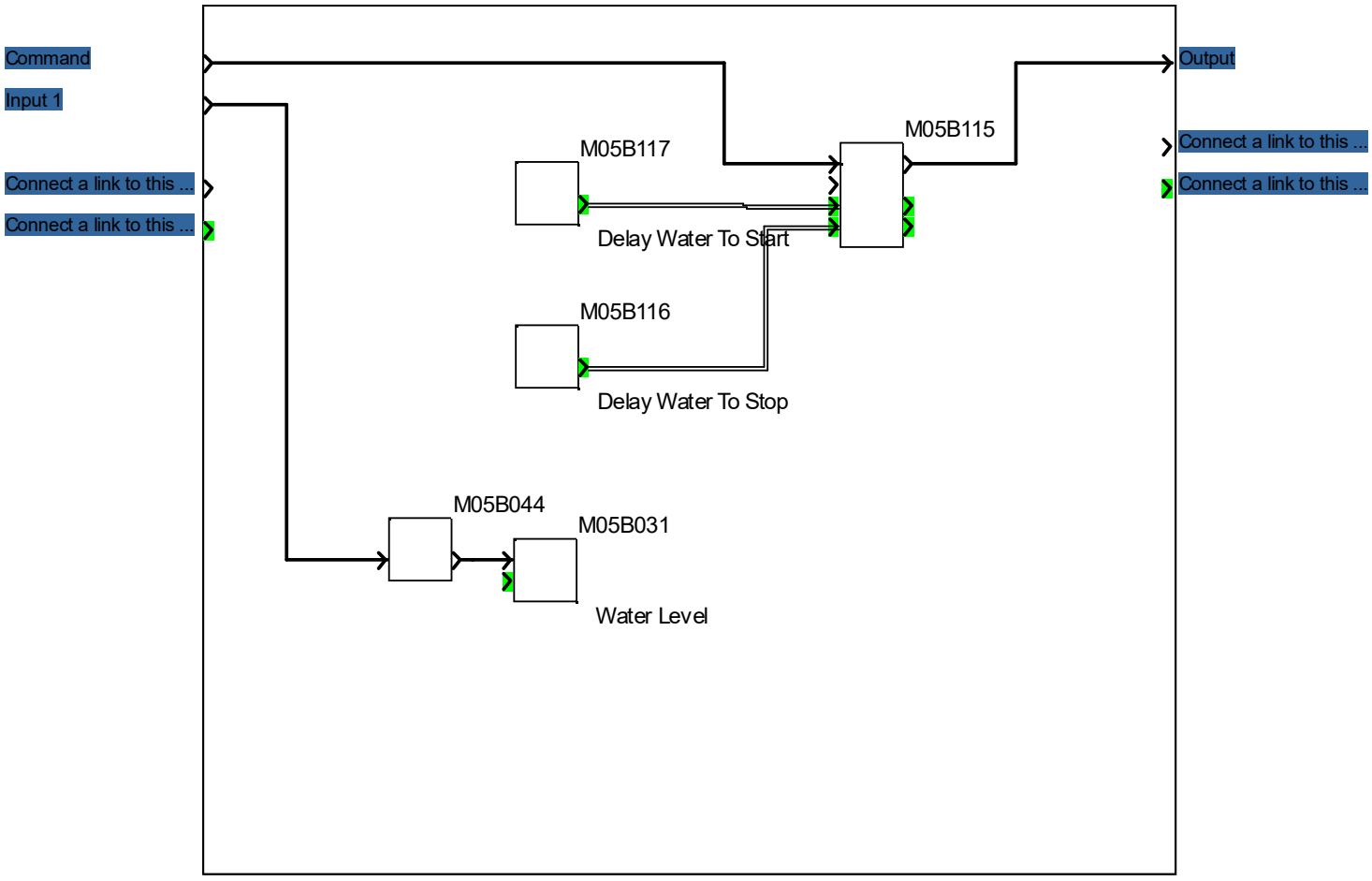


Diagram of the macro "Bin - Bin Proximity"

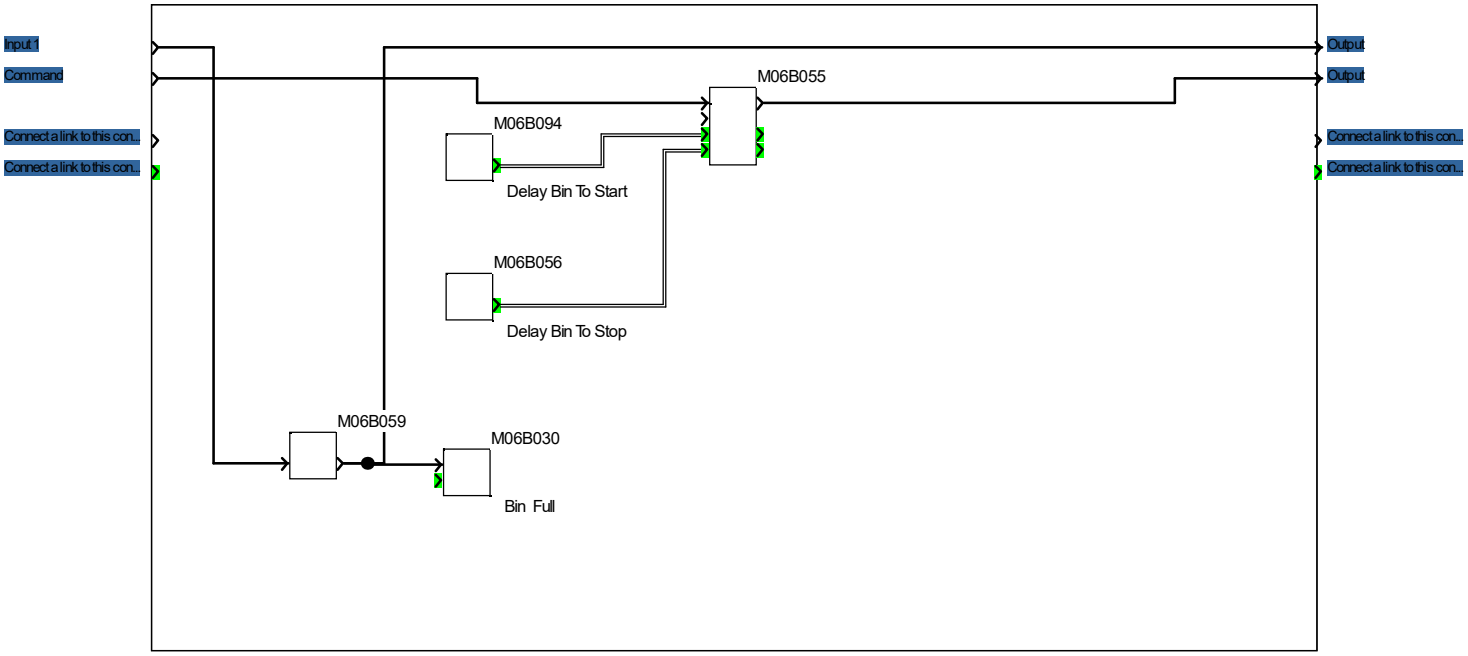
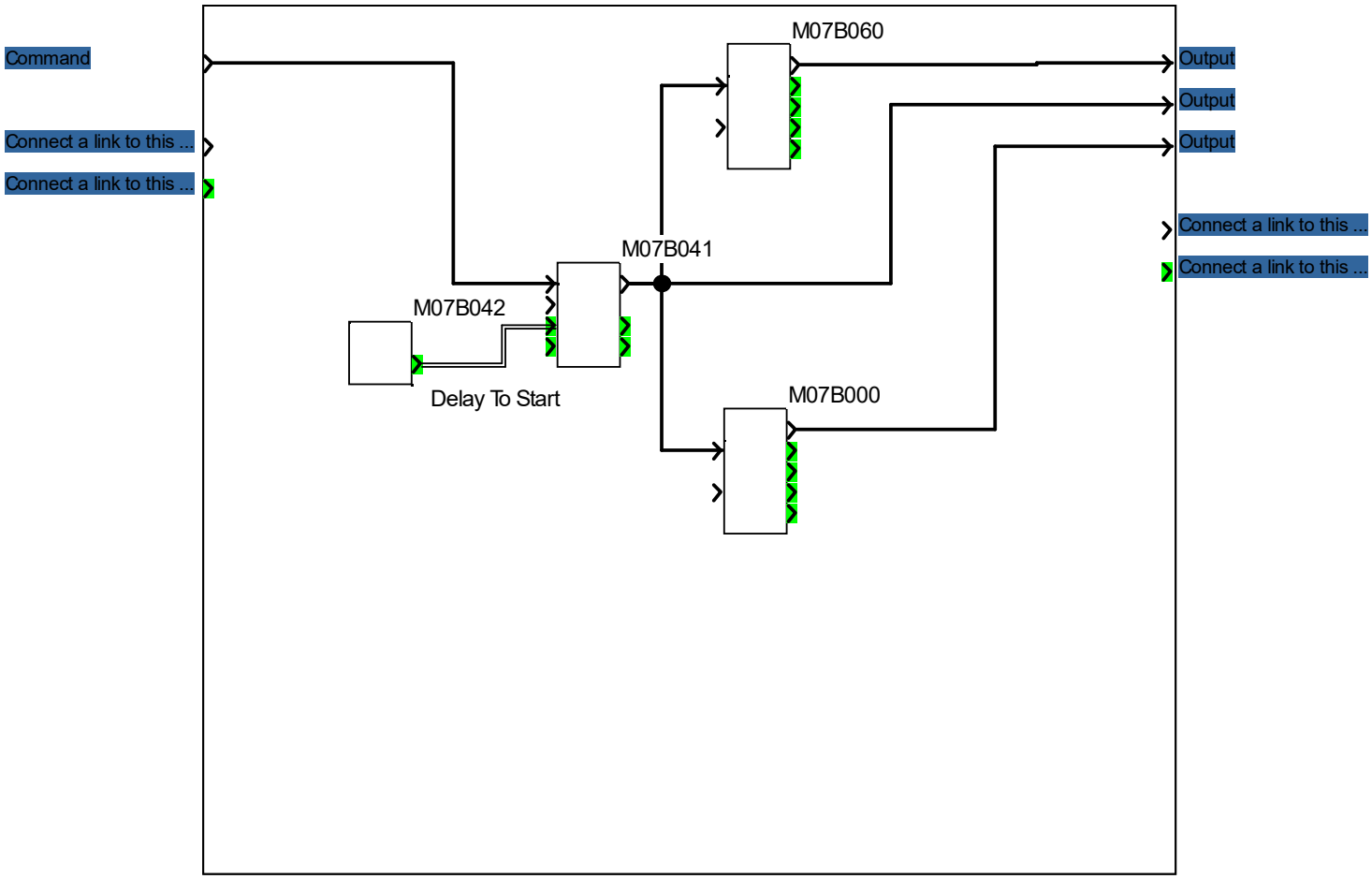
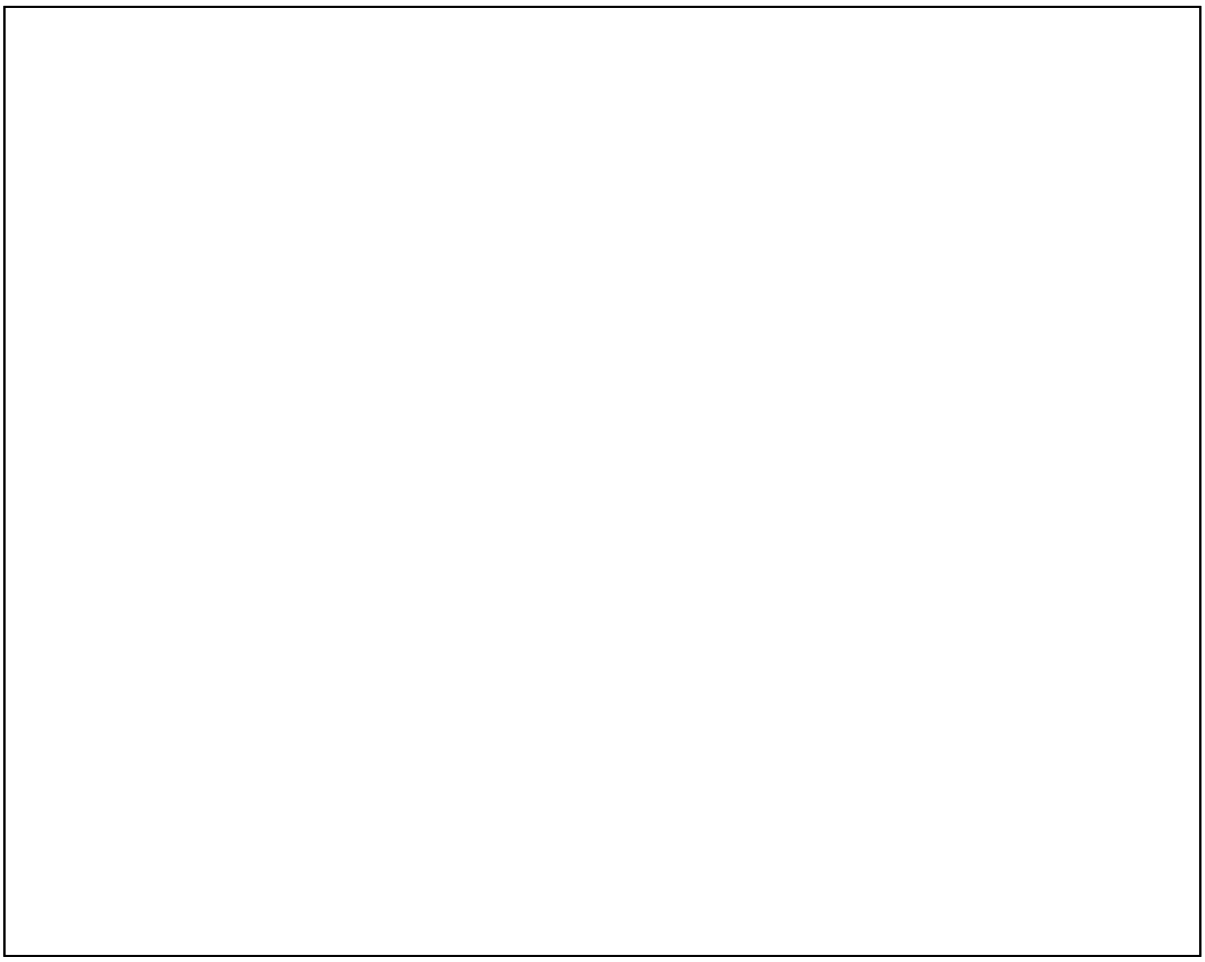


Diagram of the macro "Delay - Compressor And Screw Delays"



Supervision window



Physical inputs

Input	No	Symbol	Function	Lock	Parameters	Comment
I1	B002		Illuminated pushbutton	---	No parameters	start
I2	B003		Discrete input	---	No parameters	high pressure switch
I3	B008		Presence sensor	---	No parameters	Bin Proximity
I4	B012		Relay	---	No parameters	water level
I5	B004		Discrete input	---	No parameters	fuse error
I6	B100		Proximity sensor	---	No parameters	Screw Speed
IB	B001		Analog input 0...10V	---	Electrical connection at input : 0 - 10 V	Evaporator sensor
IJ XT2	B000		Analog input expansion 10bits	---	No parameters	Condenser Sensor

Module keys

No	Symbol	Function	Comment
I01B05		Z1 button	
I02B00		Z2 button	
I01B08		Z4 button	Reset
I02B12		Z4 button	
I04B07		Z4 button	Reset

Physical outputs

Output	No	Symbol	Function	Comment
Q1	B005		Cylinder	compressor
Q2	B006		Motor	Screw Motor
Q3	B007		Fan	Condenser Fan
Q4	B091		Resistance	Compressor Rresistance
Q8	B009		Green indicator light	Run
Q9	B010		Orange indicator light	Bin Full
QA	B011		Red indicator light	Error

Configurable functions

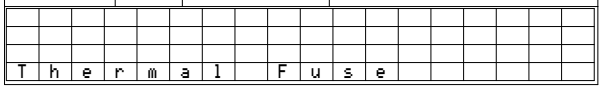
No	Symbol	Function	Lock	Latching	Parameters	Comment
B026		Logic AND	---	---	No parameters	Start
B032		LCD display	---	---	See details below	Thermal Fuse
I01B01		Gain = A/B x value + C	No	---	Gain: y = (150/1023) x + -25 Range: -32768 <= y <= 32767	
I01B02		Numerical constant	No	---	Value of the constant : 25	Condenser Fan On
I01B02		Schmitt trigger	---	---	No parameters	Condenser Fan
I01B02		Numerical constant	No	---	Value of the constant : 20	Condenser Fan off
I01B05		Text	---	---	See details below	
I01B07		Schmitt trigger	---	---	No parameters	Very High Temperature
I01B07		Numerical constant	No	---	Value of the constant : 100	Condenser Error On
I01B07		Numerical constant	No	---	Value of the constant : 54	Condenser Error Off
I01B07		Preset up/down counter	No	No	Output ON when the preset value is reached : 3 Cycle Single	
I01B07		Timer	No	Yes	On time : 0H 0M 7S Off time : 0H 0M 2S	
I01B08		Timer	No	Yes	On time : 0H 0M 7S Off time : 0H 0M 8S	
I01B08		LCD display	---	---	See details below	High Pressure
I01B08		LCD display	---	---	See details below	High Pressure
I01B08		Logic AND	---	---	No parameters	While Start And High Temperature Fan Is Running
M01		condenser	---	---	See blocks M01BXX	
I02B00		Text	---	---	See details below	
I02B04		Gain = A/B x value + C	No	---	Gain: y = (124/1000) x + -20 Range: -32768 <= y <= 32767	
I02B05		Numerical constant	No	---	Value of the constant : -3	Evaporator Min Temperature
I02B05		Numerical constant	No	---	Value of the constant : -10	Evaporator Max Temperature
I02B11		Comparison MIN =< value =< MAX	---	---	ON in the zone	Temperature Check
I02B11		LCD display	---	---	See details below	

No	Symbol	Function	Lock	Latching	Parameters	Comment
I02B12		Timer	No	Yes	On time : 0H 20M 20S Off time : 0H 0M 0S	Wait Evaporator Temp Drop Down
M02		Evaporator	---	---	See blocks M02BXX	
I03B09		Comparison MIN =< value =< MAX	---	---	ON in the zone	Speed Check
I03B09		Numerical constant	No	---	Value of the constant : 100	Min Speed
I03B09		Numerical constant	No	---	Value of the constant : 10	Max Speed
I03B10		Preset up/down counter	No	No	Output ON when the preset value is reached : 0 Cycle Single	Speed
I03B11		Timer	No	Yes	On time : 0H 1M 0S Off time : 0H 0M 1S	
M03		Screw Speed	---	---	See blocks M03BXX	
I04B02		LCD display	---	---	See details below	High Pressure
I04B06		Preset up/down counter	No	No	Output ON when the preset value is reached : 3 Cycle Single	
I04B06		Timer	No	Yes	On time : 0H 0M 7S Off time : 0H 0M 2S	
I04B06		Timer	No	Yes	On time : 0H 0M 7S Off time : 0H 0M 8S	
I04B07		LCD display	---	---	See details below	High Pressure
M04		High Pressure	---	---	See blocks M04BXX	
I05B03		LCD display	---	---	See details below	Water Level
I05B11		Timer A/C ext setpoint	---	No	Unit : x 1 s	
I05B11		Numerical constant	No	---	Value of the constant : 5	Delay Water To Stop
I05B11		Numerical constant	No	---	Value of the constant : 5	Delay Water To Start
M05		Water Level	---	---	See blocks M05BXX	
I06B03		LCD display	---	---	See details below	Bin Full
I06B05		Timer A/C ext setpoint	---	No	Unit : x 1 s	
I06B05		Numerical constant	No	---	Value of the constant : 10	Delay Bin To Stop
I06B09		Numerical constant	No	---	Value of the constant : 10	Delay Bin To Start

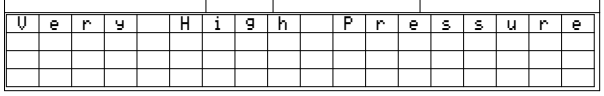
No	Symbol	Function	Lock	Latching	Parameters	Comment
M06		Bin Proximity	---	---	See blocks M06BXX	
I07B00		Timer	No	No	On time : 0H 0M 4S Off time : 0H 1M 40S	
I07B04		Timer A/C ext setpoint	---	No	Unit : x 1 s	
I07B04		Numerical constant	No	---	Value of the constant : 90	Delay To Start
I07B06		Timer	No	No	On time : 0H 0M 10S Off time : 0H 0M 40S	
M07		Compressor And Screw Delays	---	---	See blocks M07BXX	

DISPLAY (LCD display)

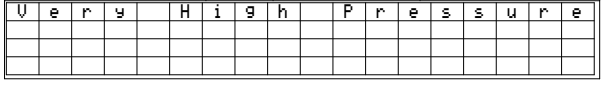
B032		LCD display	Thermal Fuse



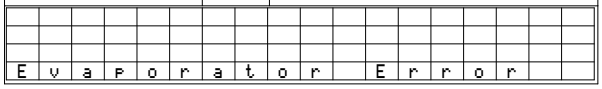
M01B084		LCD display	High Pressure



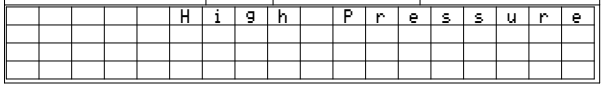
M01B087		LCD display	High Pressure



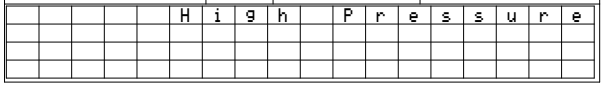
M02B119		LCD display



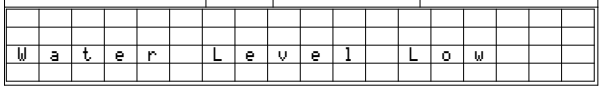
M04B027		LCD display	High Pressure



M04B070		LCD display	High Pressure



M05B031		LCD display	Water Level



M06B030		LCD display	Bin Full

Bin Full

FBD TEXT (Text)

M01B057		Text

Temperatures
Condenser **#7*

Modification not authorized for #7 M01B018 Calculation output

M02B000		Text

Temperature
Evaporator **#4*

Modification not authorized for #4 M02 Calculation output