

# Main

## Main Properties

General	
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<b>Name</b>	Main	<b>Number</b>	1	<b>Type</b>	OB
<b>Language</b>	LAD				

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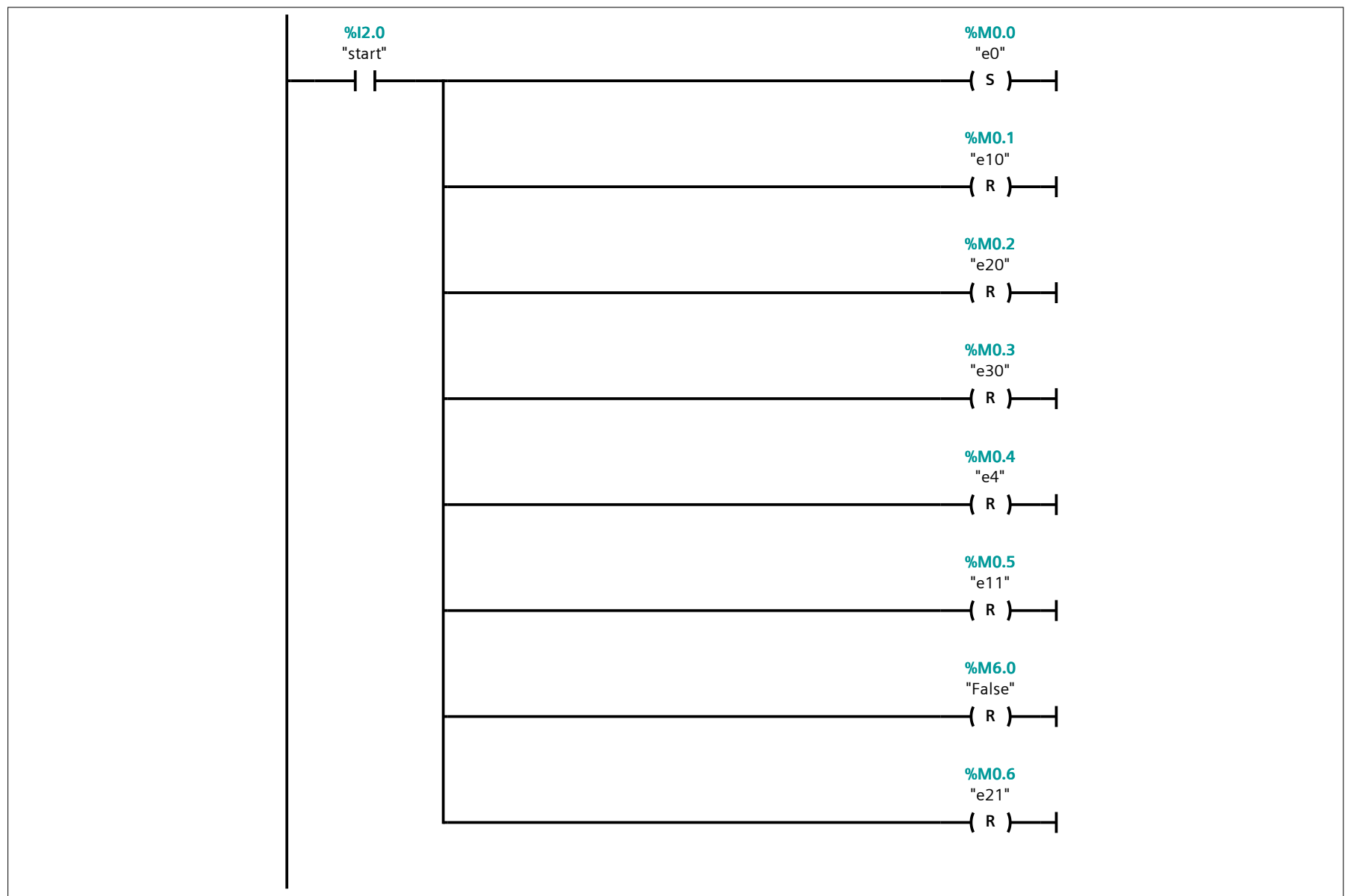
Information
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<b>Title</b>	"Main Program Sweep (Cycle)"	<b>Author</b>		<b>Comment</b>	
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Family		Version	0.1	User-defined ID	
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Name	Data type	Offset	Comment
▼ Temp			
OB1_EV_CLASS	Byte		Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)
OB1_SCAN_1	Byte		1 (Cold restart scan 1 of OB 1), 3 (Scan 2-n of OB 1)
OB1_PRIORITY	Byte		Priority of OB Execution
OB1_OB_NUMBR	Byte		1 (Organization block 1, OB1)
OB1_RESERVED_1	Byte		Reserved for system
OB1_RESERVED_2	Byte		Reserved for system
OB1_PREV_CYCLE	Int		Cycle time of previous OB1 scan (milliseconds)
OB1_MIN_CYCLE	Int		Minimum cycle time of OB1 (milliseconds)
OB1_MAX_CYCLE	Int		Maximum cycle time of OB1 (milliseconds)
OB1_DATE_TIME	Date_And_Time		Date and time OB1 started

## Network 1: Start



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Symbol	Address	Type	Comment
"e0"	%M0.0	Bool	Estado 0
"start"	%I2.0	Bool	Inicia o sistema
"e10"	%M0.1	Bool	Estado 1.0
"e20"	%M0.2	Bool	Estado 2.0
"e30"	%M0.3	Bool	Estado 3.0
"e4"	%M0.4	Bool	Estado 4
"e11"	%M0.5	Bool	Estado 1.1
"False"	%M6.0	Bool	Variavel auxiliar = 0
"e21"	%M0.6	Bool	Estado 2.1

Network 2: Transicoes e0

```
graph LR; R1(( )) --- L1["%M0.0  
\"e0\""]; L1 --- L2["%I1.0  
\"sbm\""]; L2 --- L3["%M6.1  
\"homming\""]; L3 --- L4["%M6.2  
\"iniciar\""]; L4 --- L5["%M0.1  
\"e10\""]; L5 --- S1["( S )"]; L3 --- L6["%M6.1  
\"homming\""]; L6 --- L7["%M9.7  
\"auto\""]; L7 --- L8["%M0.5  
\"e11\""]; L8 --- S2["( S )"]; L5 --- L9["%M0.0  
\"e0\""]; L9 --- R2["( R )"];
```

Symbol	Address	Type	Comment
"e0"	%M0.0	Bool	Estado 0
"iniciar"	%M6.2	Bool	Botao iniciar
"e10"	%M0.1	Bool	Estado 1.0
"sbm"	%I1.0	Bool	Sensor de nivel baixo maturador
"e11"	%M0.5	Bool	Estado 1.1
"homming"	%M6.1	Bool	Modo homming
"auto"	%M9.7	Bool	Modo automatico

Network 3: Inicia modo automatico

```
graph LR; R1(( )) --- L1["%M0.0  
\"e0\""]; L1 --- L2["%M6.2  
\"iniciar\""]; L2 --- L3["%M6.1  
\"homming\""]; L3 --- L4["%M9.7  
\"auto\""]; L4 --- L5["%M9.7  
\"auto\""]; L5 --- S1["( S )"];
```

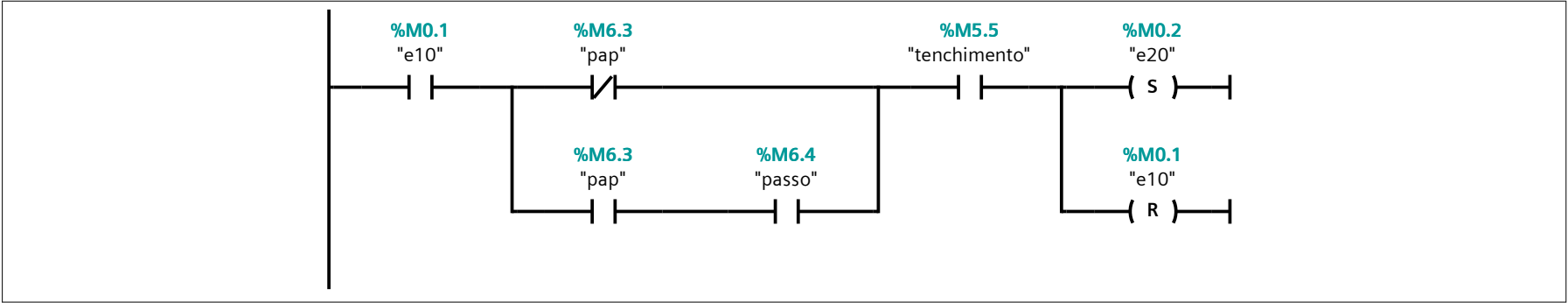
Symbol	Address	Type	Comment
"e0"	%M0.0	Bool	Estado 0
"iniciar"	%M6.2	Bool	Botao iniciar
"homming"	%M6.1	Bool	Modo homming
"auto"	%M9.7	Bool	Modo automatico

Network 4: Inicia modo homming

```
graph LR; R1(( )) --- L1["%M6.1  
\"homming\""]; L1 --- L2["%M9.7  
\"auto\""]; L2 --- R2["( R )"];
```

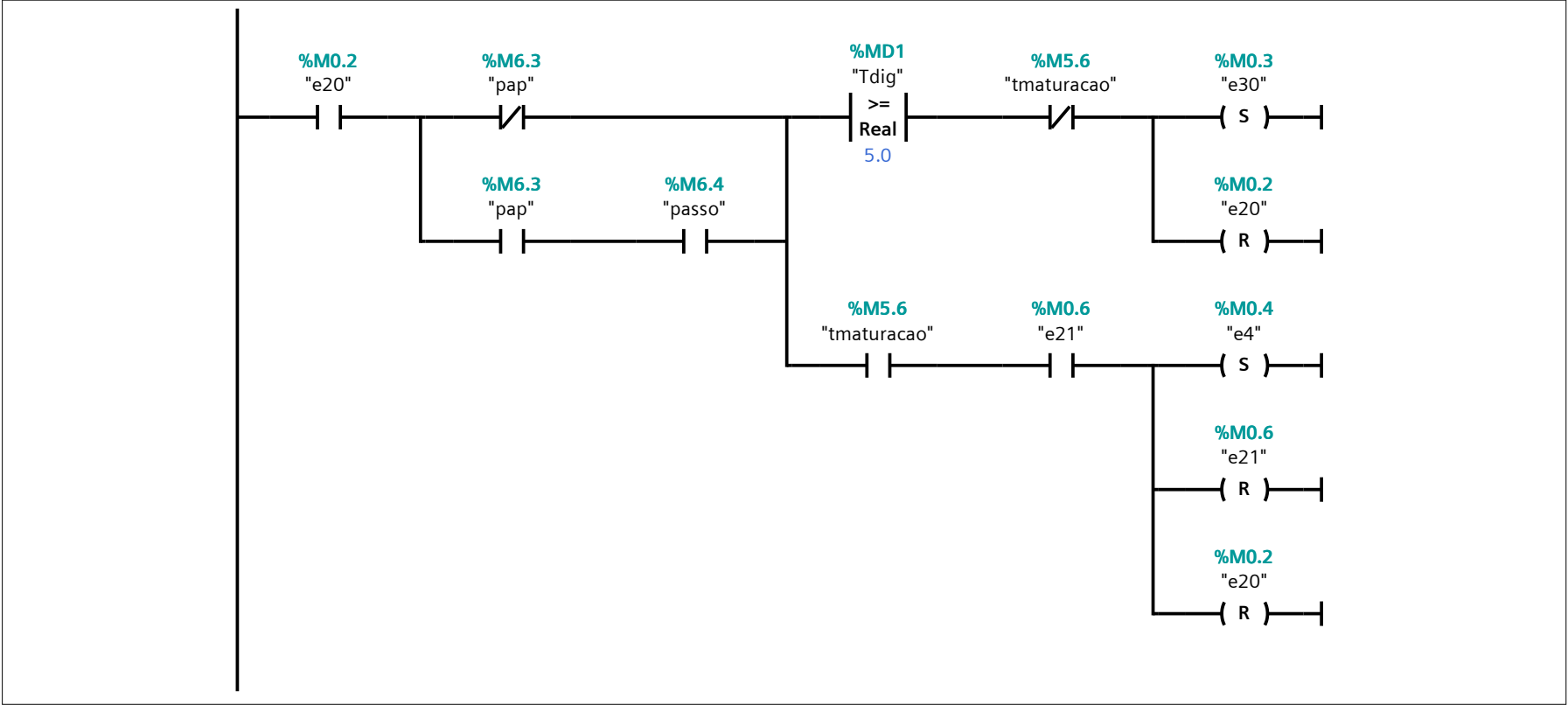
Symbol	Address	Type	Comment
"homming"	%M6.1	Bool	Modo homming
"auto"	%M9.7	Bool	Modo automatico

Network 5: Transicao e10



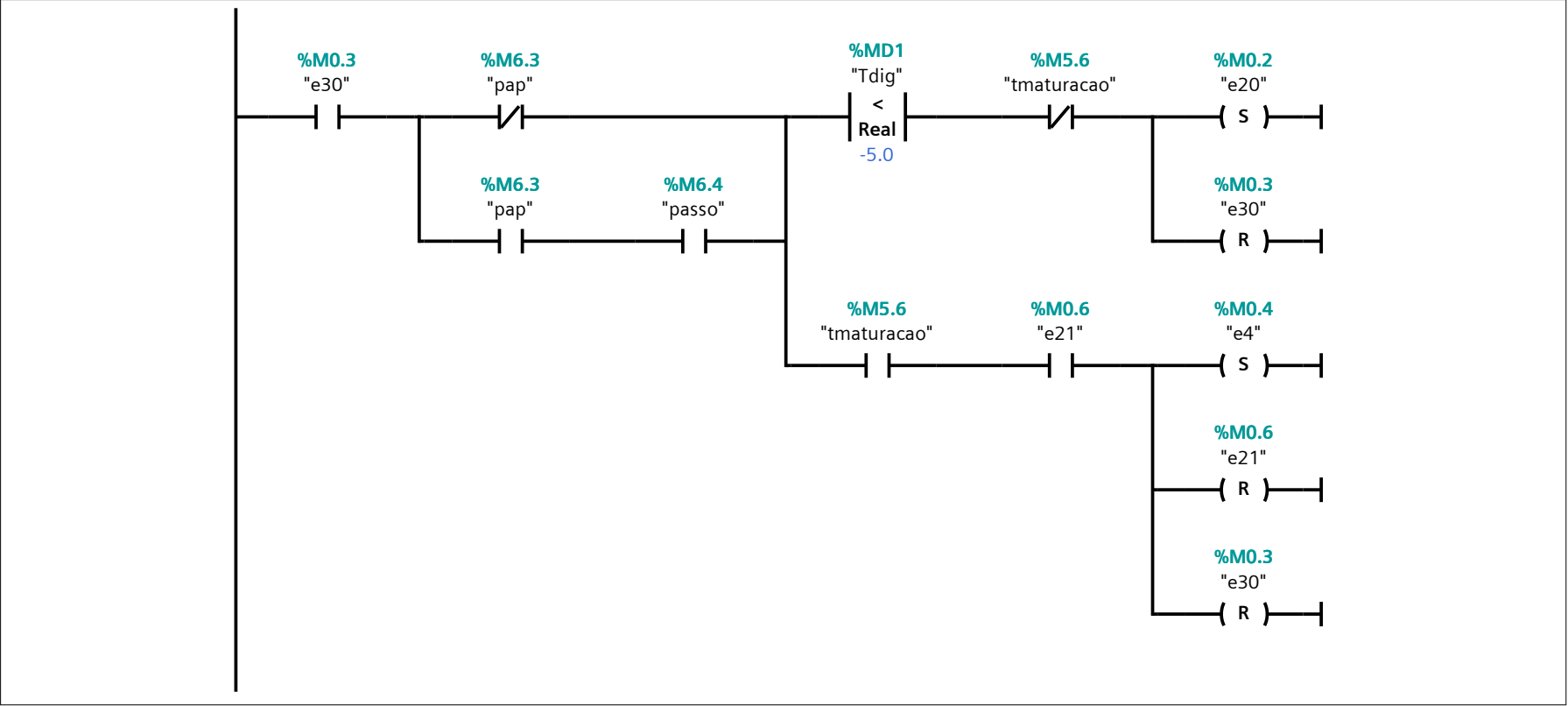
Symbol	Address	Type	Comment
"e10"	%M0.1	Bool	Estado 1.0
"e20"	%M0.2	Bool	Estado 2.0
"pap"	%M6.3	Bool	Modo passo a passo
"passo"	%M6.4	Bool	Botao de passo
"tenchimento"	%M5.5	Bool	Tempo de enchimento atingido

Network 6: Transicao e20



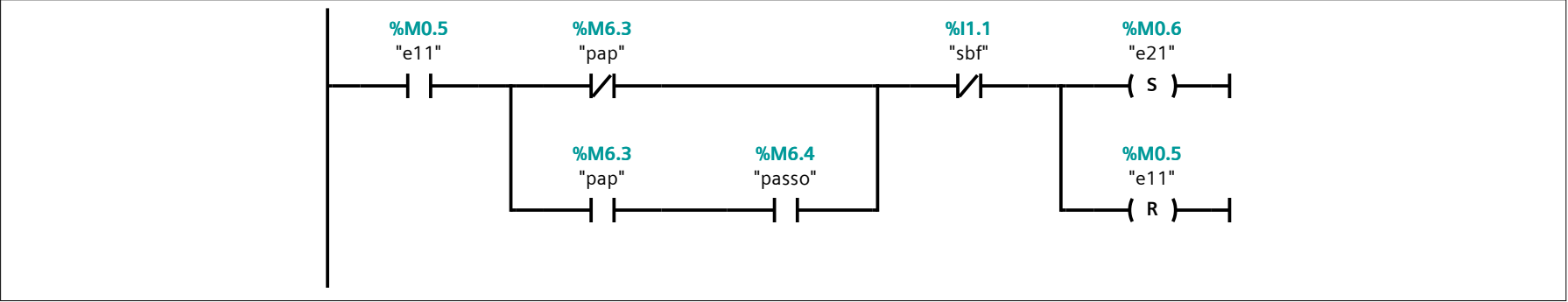
Symbol	Address	Type	Comment
"e20"	%M0.2	Bool	Estado 2.0
"e30"	%M0.3	Bool	Estado 3.0
"Tdig"	%MD1	Real	Temperatura do maturador
"e4"	%M0.4	Bool	Estado 4
"pap"	%M6.3	Bool	Modo passo a passo
"passo"	%M6.4	Bool	Botao de passo
"e21"	%M0.6	Bool	Estado 2.1
"tmaturacao"	%M5.6	Bool	Tempo de maturacao atingido
5.0	5.0	LReal	

Network 7: Transicao e30



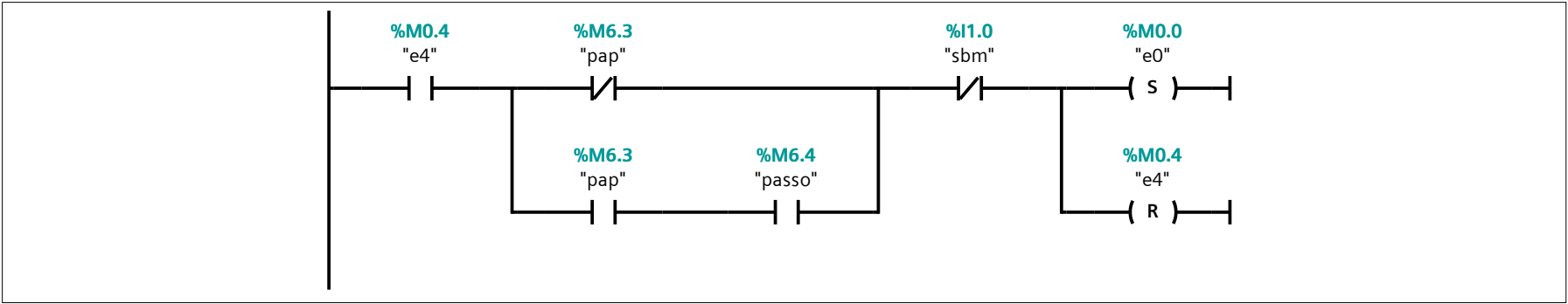
Symbol	Address	Type	Comment
"e20"	%M0.2	Bool	Estado 2.0
"e30"	%M0.3	Bool	Estado 3.0
"Tdig"	%MD1	Real	Temperatura do maturador
"e4"	%M0.4	Bool	Estado 4
"pap"	%M6.3	Bool	Modo passo a passo
"passo"	%M6.4	Bool	Botao de passo
"e21"	%M0.6	Bool	Estado 2.1
"tmaturacao"	%M5.6	Bool	Tempo de maturacao atingido
-5.0	-5.0	LReal	

## Network 8: Transicao e11



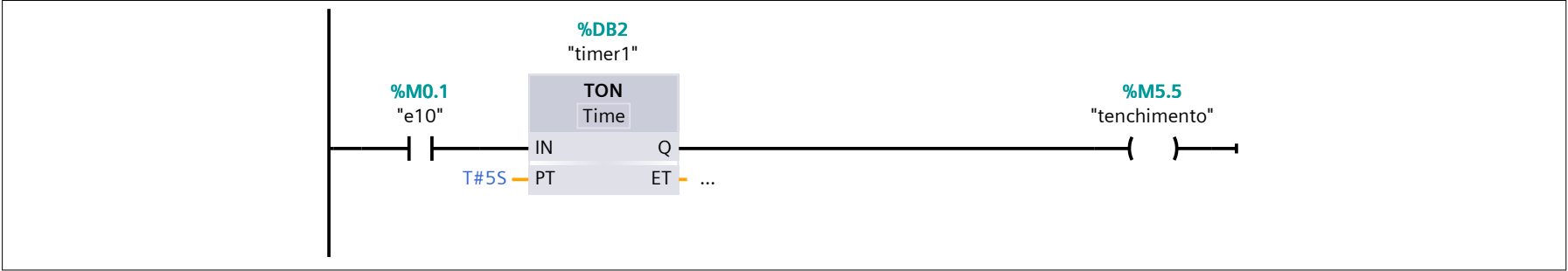
Symbol	Address	Type	Comment
"sbf"	%I1.1	Bool	Sensor de nivel baixo filtro
"e11"	%M0.5	Bool	Estado 1.1
"pap"	%M6.3	Bool	Modo passo a passo
"passo"	%M6.4	Bool	Botao de passo
"e21"	%M0.6	Bool	Estado 2.1

## Network 9: Transicao e4



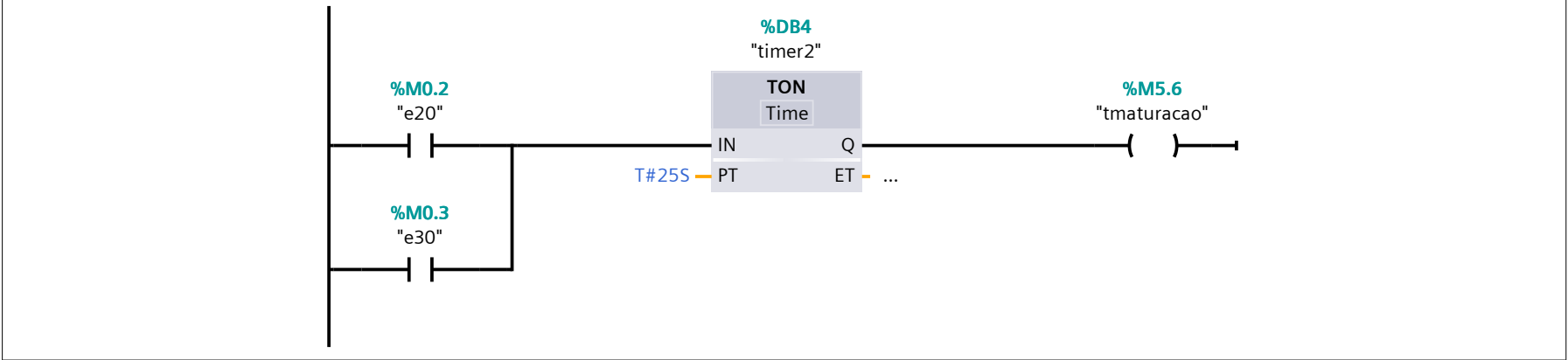
Symbol	Address	Type	Comment
"e0"	%M0.0	Bool	Estado 0
"sbm"	%I1.0	Bool	Sensor de nivel baixo maturador
"e4"	%M0.4	Bool	Estado 4
"pap"	%M6.3	Bool	Modo passo a passo
"passo"	%M6.4	Bool	Botao de passo

## Network 10: Timer Enchantment



Symbol	Address	Type	Comment
"e10"	%M0.1	Bool	Estado 1.0
"timer1"	%DB2	Block_SFB	
T#5S	T#5S	Time	
"tenchimento"	%M5.5	Bool	Tempo de enchimento atingido

## Network 11: Timer Maturacao



Symbol	Address	Type	Comment
"e20"	%M0.2	Bool	Estado 2.0
"e30"	%M0.3	Bool	Estado 3.0
"tmaturacao"	%M5.6	Bool	Tempo de maturacao atingido
"timer2"	%DB4	Block_SFB	
T#25S	T#25S	Time	

## Network 12: Conversor Temperatura Analogica

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MOVE

EN

ENO

%IW448:P

"T.P":P

IN

OUT1

%MW3

"Tscale"

Symbol	Address	Type	Comment
"Tscale"	%MW3	Int	Sinal de temperatura digital
"T.P":P	%IW448:P	Int	Sinal de temperatura

Network 13: Scala temperatura

SCALE

EN

ENO

%MW3

"Tscale"

IN

RET\_VAL

%MW7

"Error"

200.0

HI\_LIM

%MD1

"Tdig"

-20.0

LO\_LIM

OUT

%M6.0

"False"

BIPOLAR

Symbol	Address	Type	Comment
"Tdig"	%MD1	Real	Temperatura do maturador
"Tscale"	%MW3	Int	Sinal de temperatura digital
200.0	200.0	LReal	
"False"	%M6.0	Bool	Variavel auxiliar = 0
"Error"	%MW7	Word	Variavel auxiliar
-20.0	-20.0	LReal	

Network 14: Saidas vcv

%M0.1

"e10"

%Q6.3

"vcv"

Symbol	Address	Type	Comment
"e10"	%M0.1	Bool	Estado 1.0
"vcv"	%Q6.3	Bool	Valvula cerveja verde

Network 15: Saidas vfr

%M0.3

"e30"

%Q7.0

"vfr"

Symbol	Address	Type	Comment
"e30"	%M0.3	Bool	Estado 3.0
"vfr"	%Q7.0	Bool	Valvula fluido refrigerante

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### Network 16: Saidas vr

```
graph LR; e21["%M0.6  
'e21'"] --- vr["(%Q7.2  
'vr')"]
```

Symbol	Address	Type	Comment
"e21"	%M0.6	Bool	Estado 2.1
"vr"	%Q7.2	Bool	Valvula de residuos

### Network 17: Saidas vcm e vtd

```
graph LR; e4["%M0.4  
'e4'"] --- vcm["(%Q6.2  
'vcm')"]; e4 --- vtd["(%Q7.1  
'vtd')"]
```

Symbol	Address	Type	Comment
"e4"	%M0.4	Bool	Estado 4
"vcm"	%Q6.2	Bool	Valvula cerveja maturada
"vtd"	%Q7.1	Bool	Valvula de terra diatomacea

### Network 18: Alarme

```
graph LR; MD1_1["%MD1  
'Tdig'  
<  
Real  
-10.0"] --- MD1_2["%MD1  
'Tdig'  
>=  
Real  
30.0"]; MD1_2 --- M5_0["%M5.0  
'alarmeFiltro'"]; M5_0 --- M5_1["%M5.1  
'alarmeRefrig'"]; M5_1 --- M5_7["%M5.7  
'alarmeMat'"]; M5_7 --- M5_4["(%M5.4  
'alarmeCond')"]
```

Symbol	Address	Type	Comment
"Tdig"	%MD1	Real	Temperatura do maturador

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Symbol	Address	Type	Comment
"alarmeFiltro"	%M5.0	Bool	Alarme por tempo do filtro
"alarmeRefrig"	%M5.1	Bool	Alarme por tempo do Refrigerante
"alarmeCond"	%M5.4	Bool	Condicao de alarme
-10.0	-10.0	LReal	
30.0	30.0	LReal	
"alarmeMat"	%M5.7	Bool	Alarme por tempo do maturador

Network 19: Timer alarme filtro

Symbol	Address	Type	Comment
"timer3"	%DB1	Block_SFB	
"alarmeFiltro"	%M5.0	Bool	Alarme por tempo do filtro
T#10S	T#10S	Time	
"e21"	%M0.6	Bool	Estado 2.1
"tmaturacao"	%M5.6	Bool	Tempo de maturacao atingido

Network 20: Timer alarme refrigerador

Symbol	Address	Type	Comment
"vfr"	%Q7.0	Bool	Valvula fluido refrigerante
"timer4"	%DB3	Block_SFB	
"alarmeRefrig"	%M5.1	Bool	Alarme por tempo do Refrigerante
T#10S	T#10S	Time	

Network 21: Timer alarme Maturacao

Symbol	Address	Type	Comment
"e4"	%M0.4	Bool	Estado 4
T#10S	T#10S	Time	
"timer5"	%DB5	Block_SFB	



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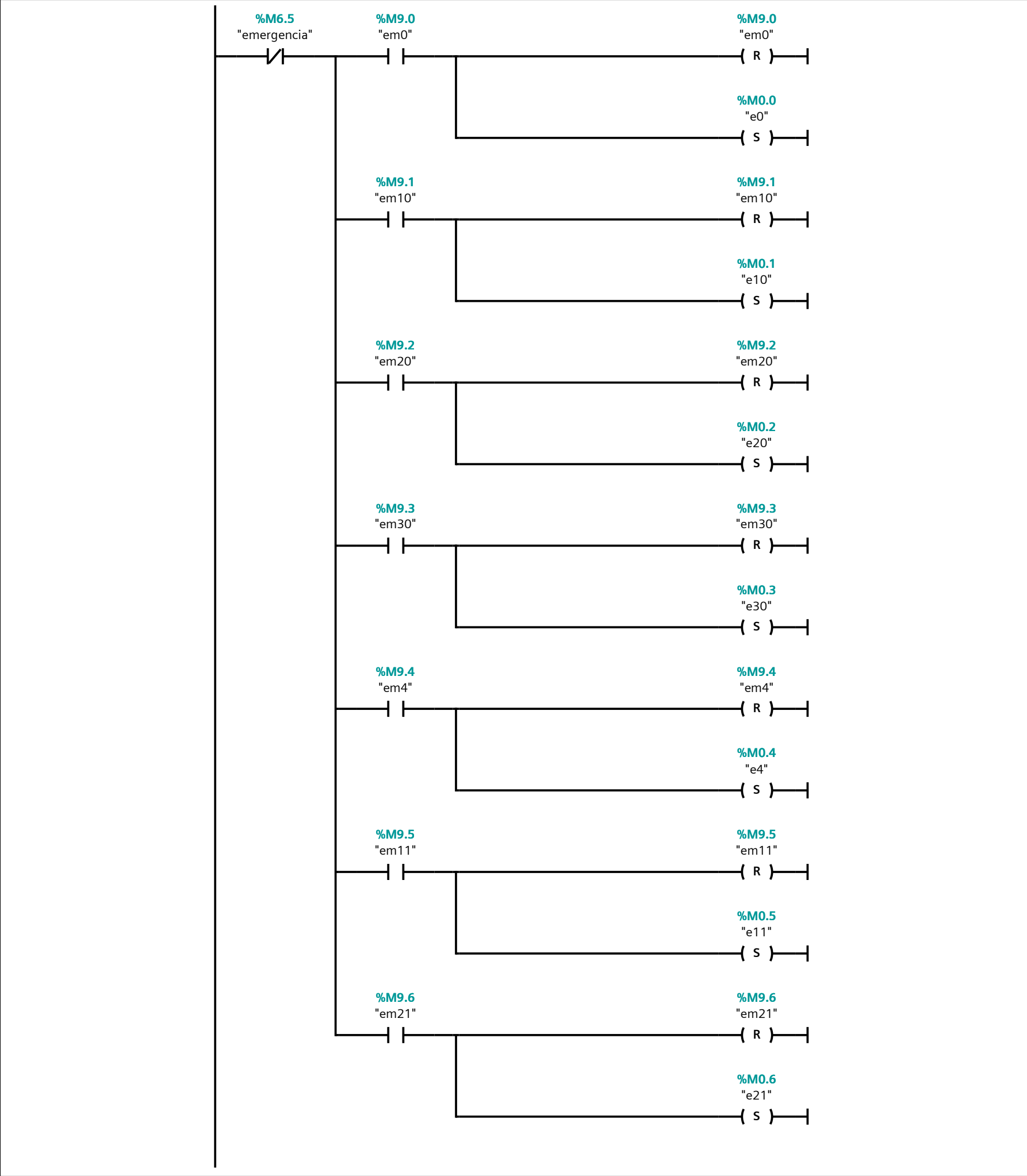
Symbol	Address	Type	Comment
"alarmeMat"	%M5.7	Bool	Alarme por tempo do maturador

### Network 22: Flipflop Alarme

```
graph LR; R["%M5.2  
\"ResetAlarm\""] --- R_in[R]; S1["%M5.4  
\"alarmeCond\""] --- S1_in[S1]; R_in --- RS["RS  
\"TrataAlarme\""]; S1_in --- RS; RS --- Q["Q"]; Q --- O1["%M6.6  
\"alarme\""];
```

Symbol	Address	Type	Comment
"alarme"	%M6.6	Bool	Estado de Alarme
"ResetAlarm"	%M5.2	Bool	Reseta alarme
"TrataAlarme"	%M5.3	Bool	
"alarmeCond"	%M5.4	Bool	Condicao de alarme

### Network 23: Reseta Emergencia



Symbol	Address	Type	Comment
"e0"	%M0.0	Bool	Estado 0
"e10"	%M0.1	Bool	Estado 1.0
"e20"	%M0.2	Bool	Estado 2.0
"e30"	%M0.3	Bool	Estado 3.0
"e4"	%M0.4	Bool	Estado 4
"e11"	%M0.5	Bool	Estado 1.1
"emergencia"	%M6.5	Bool	Modo de emergencia
"em0"	%M9.0	Bool	Estado de emergencia 0
"em10"	%M9.1	Bool	Estado de emergencia 1.0
"em20"	%M9.2	Bool	Estado de emergencia 2.0

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Symbol	Address	Type	Comment
"em30"	%M9.3	Bool	Estado de emergencia 3.0
"em4"	%M9.4	Bool	Estado de emergencia 4
"em11"	%M9.5	Bool	Estado de emergencia 1.1
"e21"	%M0.6	Bool	Estado 2.1
"em21"	%M9.6	Bool	Estado de emergencia 2.1

Network 24: Inicia Emergencia

%M6.5  
"emergencia"

( S )

%M0.0  
"e0"

( R )

%M0.1  
"e10"

( S )

%M0.2  
"e20"

( S )

%M0.3  
"e30"

( S )

%M0.4  
"e4"

( S )

%M0.5  
"e11"

( S )

%M0.6  
"e21"

( S )

%M9.0  
"em0"

%M0.0  
"e0"

%M9.1  
"em10"

%M0.1  
"e10"

%M9.2  
"em20"

%M0.2  
"e20"

%M9.3  
"em30"

%M0.3  
"e30"

%M9.4  
"em4"

%M0.4  
"e4"

%M9.5  
"em11"

%M0.5  
"e11"

%M9.6  
"em21"

%M0.6  
"e21"

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<table><tr><th>Symbol</th><th>Address</th><th>Type</th><th>Comment</th></tr><tr><td>"e0"</td><td>%M0.0</td><td>Bool</td><td>Estado 0</td></tr><tr><td>"e10"</td><td>%M0.1</td><td>Bool</td><td>Estado 1.0</td></tr><tr><td>"e20"</td><td>%M0.2</td><td>Bool</td><td>Estado 2.0</td></tr><tr><td>"e30"</td><td>%M0.3</td><td>Bool</td><td>Estado 3.0</td></tr><tr><td>"e4"</td><td>%M0.4</td><td>Bool</td><td>Estado 4</td></tr><tr><td>"e11"</td><td>%M0.5</td><td>Bool</td><td>Estado 1.1</td></tr><tr><td>"emergencia"</td><td>%M6.5</td><td>Bool</td><td>Modo de emergencia</td></tr><tr><td>"em0"</td><td>%M9.0</td><td>Bool</td><td>Estado de emergencia 0</td></tr><tr><td>"em10"</td><td>%M9.1</td><td>Bool</td><td>Estado de emergencia 1.0</td></tr><tr><td>"em20"</td><td>%M9.2</td><td>Bool</td><td>Estado de emergencia 2.0</td></tr><tr><td>"em30"</td><td>%M9.3</td><td>Bool</td><td>Estado de emergencia 3.0</td></tr><tr><td>"em4"</td><td>%M9.4</td><td>Bool</td><td>Estado de emergencia 4</td></tr><tr><td>"em11"</td><td>%M9.5</td><td>Bool</td><td>Estado de emergencia 1.1</td></tr><tr><td>"e21"</td><td>%M0.6</td><td>Bool</td><td>Estado 2.1</td></tr><tr><td>"em21"</td><td>%M9.6</td><td>Bool</td><td>Estado de emergencia 2.1</td></tr></table>	Symbol	Address	Type	Comment	"e0"	%M0.0	Bool	Estado 0	"e10"	%M0.1	Bool	Estado 1.0	"e20"	%M0.2	Bool	Estado 2.0	"e30"	%M0.3	Bool	Estado 3.0	"e4"	%M0.4	Bool	Estado 4	"e11"	%M0.5	Bool	Estado 1.1	"emergencia"	%M6.5	Bool	Modo de emergencia	"em0"	%M9.0	Bool	Estado de emergencia 0	"em10"	%M9.1	Bool	Estado de emergencia 1.0	"em20"	%M9.2	Bool	Estado de emergencia 2.0	"em30"	%M9.3	Bool	Estado de emergencia 3.0	"em4"	%M9.4	Bool	Estado de emergencia 4	"em11"	%M9.5	Bool	Estado de emergencia 1.1	"e21"	%M0.6	Bool	Estado 2.1	"em21"	%M9.6	Bool	Estado de emergencia 2.1		
Symbol	Address	Type	Comment																																																															
"e0"	%M0.0	Bool	Estado 0																																																															
"e10"	%M0.1	Bool	Estado 1.0																																																															
"e20"	%M0.2	Bool	Estado 2.0																																																															
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"e4"	%M0.4	Bool	Estado 4																																																															
"e11"	%M0.5	Bool	Estado 1.1																																																															
"emergencia"	%M6.5	Bool	Modo de emergencia																																																															
"em0"	%M9.0	Bool	Estado de emergencia 0																																																															
"em10"	%M9.1	Bool	Estado de emergencia 1.0																																																															
"em20"	%M9.2	Bool	Estado de emergencia 2.0																																																															
"em30"	%M9.3	Bool	Estado de emergencia 3.0																																																															
"em4"	%M9.4	Bool	Estado de emergencia 4																																																															
"em11"	%M9.5	Bool	Estado de emergencia 1.1																																																															
"e21"	%M0.6	Bool	Estado 2.1																																																															
"em21"	%M9.6	Bool	Estado de emergencia 2.1																																																															