

Escena_ST

```
1 |      10|      20|      30|      40|      50|      60|      70|      80|      90|     100|     110|
1  (*configurar Emitter-----*)
2  F_TRIG_12 (CLK := stop);
3  R_TRIG_5 (CLK := run);
4  F_TRIG_13 (CLK := SensorFinAzul);
5  F_TRIG_14 (CLK := SensorFinVerde);
6  F_TRIG_15 (CLK := SensorFinGris);
7  F_TRIG_16 (CLK := SensorFinCajaG);
8  F_TRIG_17 (CLK := Sensorcajapeque);
9  F_TRIG_42 (CLK := Sensorcajapeque);
10
11 if (F_TRIG_12.Q) or (R_TRIG_5.Q and not cintal and not cinta2 and not cinta3 and not cinta4 and not rodillos and not trans_neg and not trans_pos) or (F_TRIG_13.Q) or (F_TRIG_14.Q) or (F_TRIG_15.Q) or (F_TRIG_16.Q) or (F_TRIG_17.Q) or (F_TRIG_42.Q) then
12   emitter:=1;
13   start_light:=1;
14 end_if;
15
16 if R_TRIG_5.Q then
17   stop_light:=0;
18   %M50:=0;
19   reset_light:=0;
20   %M51:=0;
21 end_if;
22
23 if ((F_TRIG_13.Q) or (F_TRIG_14.Q) or (F_TRIG_15.Q) or (F_TRIG_16.Q) or (F_TRIG_17.Q) or (F_TRIG_42.Q)) and %M50 then
24   start_light:=0;
25 end_if;
26 if not stop then
27   aux_stop:=1;
28 end_if;
29 R_TRIG_6 (CLK := run);
30
31 if R_TRIG_6.Q then
32   aux_stop:=0;
33 end_if;
34 R_TRIG_7 (CLK := sensoremitter);
35
36 if aux_stop or R_TRIG_7.Q then
37   emitter:=0;
38 end_if;
39
40 (*MoverCintal-----*)
41
42 F_TRIG_18 (CLK := sensoremitter);
43 if F_TRIG_18.Q then
44   cintal:=1;
45 end_if;
46
47 F_TRIG_19 (CLK := sensorcinta2);
48 TP_16 (IN := F_TRIG_19.Q,
49         PT := t#2s);
50 F_TRIG_20 (CLK := TP_16.Q);
51 if F_TRIG_20.Q then
52   cintal:=0;
53 end_if;
54 (*Guarda memoria caja azul-----*)
55 F_TRIG_21 (CLK := sensorEmitter);
56
57 if sensorAzul then
58   %M80:=1;
59 end_if;
60 if F_TRIG_21.Q then
61   %M80:=0;
62 end_if;
63 (*Guarda memoria caja verde-----*)
64 F_TRIG_22 (CLK := sensorEmitter);
65
66 if sensorverde then
67   %M81:=1;
68 end_if;
69 if F_TRIG_22.Q then
70   %M81:=0;
71 end_if;
72
73 (*Mover cinta2-----*)
74
75 F_TRIG_23 (CLK := sensorbackLimit);
76 if not sensorcinta2 then
77   cinta2:=1;
78 end_if;
79 if F_TRIG_23.Q then
80   cinta2:=0;
81 end_if;
82
83 (*Almacenar caja Verde y girar mesa-----*)
84 TP_17 (IN := sensor90limit,
85         PT := t#2s);
86 aux_almacen := AND (IN1 := TP_17.Q,
87                      IN2 := %M81);
88 aux_cinta := OR (IN1 := aux_almacen,
89                  IN2 := not sensorfincinta2);
90
```

Escena_ST

```
1|      10|      20|      30|      40|      50|      60|      70|      80|      90|     100|     110|
91 memorias := OR (IN1 := not %M80,
92                   IN2 := not %M81);
93
94 activar_trans_pos := AND (IN1 := aux_cinta,
95                           IN2 := memorias);
96 if activar_trans_pos then
97   trans_pos:=1;
98 end_if;
99
100 (*Mover la cinta cuando la pieza es gris o de cartón-----*)
101
102 F_TRIG_24 (CLK := sensorbackLimit);
103 aux_senosrback := AND (IN1 := %M81,
104                         IN2 := F_TRIG_24.Q);
105
106 F_TRIG_40 (CLK := sensorbackLimit);
107 aux_senosrback_80 := AND (IN1 := %M80,
108                           IN2 := F_TRIG_40.Q);
109 aux_giro := OR (IN1 := aux_senosrback,
110                  IN2 := aux_senosrback_80);
111 if aux_giro then
112   giro:=1;
113 end_if;
114
115 TON_5 (IN := sensor90limit,
116          PT := t#4s);
117
118 TON_6 (IN := not sensorfinazul,
119          PT := t#4s);
120 reset_giro := OR (IN1 := TON_5.Q,
121                     IN2 := TON_6.Q);
122 if reset_giro then
123   giro:=0;
124 end_if;
125
126 F_TRIG_26 (CLK := sensorcinta3);
127 TP_18 (IN := f_trig_26.Q,
128          PT := t#2s);
129 F_TRIG_27 (CLK := TP_18.Q);
130
131 R_TRIG_8 (CLK := SensorFinverde);
132 F_TRIG_28 (CLK := r_trig_8.Q);
133
134 RESET_TRANS_POS := OR (IN1 := aux_senosrback,
135                         IN2 := aux_senosrback_80,
136                         IN3 := F_TRIG_27.Q,
137                         IN4 := F_TRIG_28.Q);
138
139 R_TRIG_9 (CLK := RESET_TRANS_POS);
140
141 if R_TRIG_9.Q then
142   trans_pos:=0;
143 end_if;
144 (*Almacenar caja Azul-----*)
145 TP_19 (IN := sensor90limit,
146          PT := t#4s);
147 activar_trans_neg := AND (IN1 := TP_19.Q,
148                           IN2 := %M80);
149 if activar_trans_neg then
150   trans_neg:=1;
151 end_if;
152
153 TON_7 (IN := sensor90limit,
154          PT := t#4s);
155 if TON_7.Q then
156   trans_neg:=0;
157 end_if;
158
159 (*Mover cinta3-----*)
160
161
162
163
164 F_TRIG_29 (CLK := sensorcinta3);
165 if F_TRIG_29.Q then
166   cinta3:=1;
167 end_if;
168 F_TRIG_30 (CLK := sensorcinta3);
169 TP_20 (IN := F_TRIG_30.Q,
170          PT := t#6s);
171
172 F_TRIG_31 (CLK := TP_20.Q);
173
174 if F_TRIG_31.Q then
175   cinta3:=0;
176 end_if;
177
178 (*Guarda memoria caja gris-----*)
179
180 if sensorgris then
181   %M82:=1;
182 end_if;
183
```

Escena_ST

```
1|      10|      20|      30|      40|      50|      60|      70|      80|      90|     100|     110|
184 F_TRIG_32 (CLK := sensoremitter);
185 if F_TRIG_32.Q then
186   %M82:=0;
187 end_if;
188
189 (*Orientar rodillos a la izquierda-----*)
190 F_TRIG_33 (CLK := SensorFingris);
191
192 TP_21 (IN := F_TRIG_33.Q,
193           PT := t#2s);
194
195 F_TRIG_34 (CLK := TP_21.Q);
196
197 if %M82 then
198   rodillos_izq:=1;
199 end_if;
200
201 if F_TRIG_34.Q then
202   rodillos_izq:=0;
203 end_if;
204
205 F_TRIG_35 (CLK := SensorRodillos);
206 if F_TRIG_35.Q then
207   rodillos:=1;
208 end_if;
209
210 F_TRIG_36 (CLK := sensorcinta4);
211 reset_rodillos := OR (IN1 := F_TRIG_33.Q,
212                         IN2 := F_TRIG_36.Q);
213 if reset_rodillos then
214   rodillos:=0;
215 end_if;
216
217 (*Mover cinta4-----*)
218 if F_TRIG_36.Q then
219   cinta4:=1;
220 end_if;
221
222 TP_22 (IN := F_TRIG_36.Q,
223           PT := t#2.15s);
224 F_TRIG_37 (CLK := TP_22.Q);
225 R_TRIG_10 (CLK := Difusse_sensor1);
226 if R_TRIG_10.Q then
227   aux_caja_grande:=1;
228 end_IF;
229
230 if F_TRIG_37.Q and aux_caja_grande then
231   rodillo_stop:=1;
232   empuje:=1;
233   cinta4:=0;
234 end_if;
235
236 F_TRIG_38 (CLK := SensorFinCajaG);
237 TP_23 (IN := F_TRIG_38.Q,
238           PT := t#0.5s);
239
240 F_TRIG_39 (CLK := TP_23.Q);
241
242 if F_TRIG_39.Q then
243   rodillo_stop:=0;
244   empuje:=0;
245   aux_caja_grande:=0;
246 end_if;
247
248 if F_TRIG_37.Q and not aux_caja_grande then
249   cinta4:=1;
250 end_if;
251
252 F_TRIG_41 (CLK := Sensorcajapeque);
253 if F_TRIG_41.Q then
254   cinta4:=0;
255 end_if;
256
257
258 R_TRIG_11 (CLK := reseteo);
259 if R_TRIG_11.Q then
260   %M51:=0;
261 end_if;
262
263 if (R_TRIG_11.Q and not start_light) or not em_stop then
264   reset_light:=0;
265   start_light:=0;
266   stop_light:=0;
267   cintal:=0;
268   cinta2:=0;
269   cinta3:=0;
270   cinta4:=0;
271   trans_pos:=0;
272   giro:=0;
273   rodillos:=0;
274   rodillos_izq:=0;
275   empuje:=0;
276   rodillo_stop:=0;
```

Escena_ST

```
1|      10|      20|      30|      40|      50|      60|      70|      80|      90|     100|     110|
277   trans_neg:=0;
278   end_if;
279   if %M51 and %S6 then
280     reset_light:=1;
281   end_if;
282   if %M51 and not %S6 then
283     reset_light:=0;
284   end_if;
285
286   F_TRIG_5 (CLK := stop);
287   if F_TRIG_5.Q then
288     stop_light:=1;
289     %M50:=1;
290   end_if;
291
292   F_TRIG_6 (CLK := em_stop);
293   if F_TRIG_6.Q then
294     %M51:=1;
295   end_if;
296
```