

Escena6_ST

```
1|      10|      20|      30|      40|      50|      60|      70|      80|      90|     100|     110|
1  R_TRIG_2 (CLK := start);
2  if em_stop and stop and not reseteo and R_TRIG_2.Q then
3  SET (OUT => start_light);
4  SET (OUT => stop_blade1);
5  SET (OUT => stop_blade2);
6  RESET (OUT => stop_light);
7  RESET (OUT => reset_light);
8  RESET (OUT => %M50);
9  end_if;
10
11 if not stop and not auto then
12 lids_conveyor1:=0;
13 bases_conveyor1:=0;
14 start_light:=0;
15 stop_light:=1;
16 end_if;
17
18 (*-----Modo Automático-----*)
19 if start_light and auto and em_stop then
20   R_TRIG_3 (CLK := start);
21   if R_TRIG_3.Q and not base_at_place and not lid_at_place then
22     lids_conveyor1:=1;
23     bases_conveyor1:=1;
24   end_if;
25
26   if base_at_place and lid_at_place and not item_detected and not z then
27     set_z:=1000;
28     grab:=1;
29     set_x:=150;
30     aux_z:=1;
31   end_if;
32
33   if item_detected and base_at_place and lid_at_place then
34     set_z:=0;
35     aux_z:=0;
36   end_if;
37
38   if item_detected and not z and not x and not aux_z then
39     set_x:=890;
40     aux_temp:=1;
41   end_if;
42   TON_4 (IN := aux_temp,
43   PT := t#2s,
44   Q => aux_x);
45   if TON_4.ET = t#2s then
46     aux_temp:=0;
47   end_if;
48   if not z and aux_x then
49     aux_tempz:=1;
50   end_if;
51   TON_5 (IN := aux_tempz,
52   PT := t#2s,
53   Q => aux_z);
54   if not z and aux_x and set_x=890 then
55     set_z:=1000;
56   end_if;
57
58   if TON_5.ET =t#2s then
59     aux_tempz:=0;
60   end_if;
61   if not z and aux_z and set_z=1000 then
62     set_z:=0;
63     grab:=0;
64     stop_blade2:=0;
65   end_if;
66   if not grab and not x and set_z=0 then
67     set_x:=0;
68   end_if;
69   if not grab and not lid_at_place and base_at_place and set_x =0 then
70     bases_conveyor1:=1;
71   end_if;
72   if (base_at_place and bases_conveyor1 and not stop_blade2) or counter =3 then
73     bases_conveyor2:=1;
74   end_if;
75
76 F_TRIG_2 (CLK := part_leaving);
77 if bases_conveyor2 and F_TRIG_2.Q then
78   stop_blade2:=1;
79   bases_conveyor2:=0;
80   bases_conveyor1:=1;
81   lids_conveyor1:=1;
82 end_if;
83 if bases_conveyor2 and F_TRIG_2.Q and %M50 and counter=2 then
84   start_light:=0;
85 end_if;
86 F_TRIG_3 (CLK := part_leaving);
87 if (F_TRIG_3.Q and %M50 and counter =2 ) or (base_at_place and lid_at_place) then
88   lids_conveyor1:=0;
89   bases_conveyor1:=0;
90 end_if;
91 end_if;
92 (*-----*)
93 F_TRIG_4 (CLK := part_leaving);
```

Escena6_ST

```
1|      10|      20|      30|      40|      50|      60|      70|      80|      90|     100|     110|
94
95 CTU_4 (CU := F_TRIG_4.Q,
96        R := aux_counter,
97        CV => counter);
98
99 if counter=3 then
100 aux_counter:=1;
101 end if;
102 if counter=0 then
103 aux_counter:=0;
104 end if;
105
106 (*-----Reseteo-----*)
107
108 R_TRIG_4 (CLK := reseteo);
109 if R_TRIG_4.Q then
110     %M51:=0;
111 end if;
112 if (R_TRIG_4.Q and not start_light) or not em_stop then
113     reset_light:=0;
114     lids_conveyor1:=0;
115     stop_blade1:=1;
116     stop_blade2:=1;
117     bases_conveyor1:=0;
118     bases_conveyor2:=0;
119     grab:=0;
120     set_x:=0;
121     start_light:=0;
122     stop_light:=0;
123     set_z:=0;
124     aux_counter:=1;
125 end if;
126 if %M51 and %S6 then
127     reset_light:=1;
128 end if;
129 if %M51 and not %S6 then
130     reset_light:=0;
131 end if;
132
133 F_TRIG_5 (CLK := stop);
134 if F_TRIG_5.Q then
135     stop_light:=1;
136     %M50:=1;
137 end if;
138
139 F_TRIG_6 (CLK := em_stop);
140 if F_TRIG_6.Q then
141     %M51:=1;
142 end if;
143
144
145
146 (*-----Modo Manual-----*)
147 if start_light and manual and em_stop then
148
149     R_TRIG_5 (CLK := start);
150     if R_TRIG_5.Q and not base_at_place and not lid_at_place then
151         lids_conveyor1:=1;
152         bases_conveyor1:=1;
153     end if;
154
155     if base_at_place and lid_at_place and not item_detected and not z then
156         set_z:=1000;
157         grab:=1;
158         set_x:=150;
159         aux_z:=1;
160     end if;
161
162     if item_detected and base_at_place and lid_at_place then
163         set_z:=0;
164         aux_z:=0;
165     end if;
166
167     if item_detected and not z and not x and not aux_z then
168         set_x:=915;
169         aux_temp:=1;
170     end if;
171
172     TON_6 (IN := aux_temp,
173           PT := t#2s,
174           Q => aux_x);
175     if TON_6.ET = t#2s then
176         aux_temp:=0;
177     end if;
178     if not z and aux_x then
179         aux_tempz:=1;
180     end if;
181
182     TON_7 (IN := aux_tempz,
183           PT := t#2s,
184           Q => aux_z);
185     if not z and aux_x and set_x=915 then
186         set_z:=1000;
```

Escena6_ST

```
1|      10|      20|      30|      40|      50|      60|      70|      80|      90|     100|     110|
187      end_if;
188
189      if TON_7.ET =t#2s then
190          aux_tempz:=0;
191      end_if;
192      if not z and aux_z and set_z=1000 then
193          set_z:=0;
194          grab:=0;
195          stop_blade2:=0;
196      end_if;
197      if not grab and not x and set_z=0 then
198          set_x:=0;
199      end_if;
200      if not grab and not lid_at_place and base_at_place and set_x =0 then
201          bases_conveyor1:=1;
202      end_if;
203      if (base_at_place and bases_conveyor1 and not stop_blade2) then
204          bases_conveyor2:=1;
205      end_if;
206
207
208      F_TRIG_7 (CLK := part_leaving);
209      if bases_conveyor2 and F_TRIG_7.Q then
210          stop_blade2:=1;
211          bases_conveyor2:=0;
212          bases_conveyor1:=1;
213          lids_conveyor1:=1;
214          start_light:=0;
215      end_if;
216
217      F_TRIG_8 (CLK := part_leaving);
218      F_TRIG_9 (CLK := lid_at_place);
219      F_TRIG_10 (CLK := base_at_place);
220      if (F_TRIG_8.Q or F_TRIG_9.Q or F_TRIG_10.Q) then
221          lids_conveyor1:=0;
222          bases_conveyor1:=0;
223      end_if;
224  end_if;
225
```