```
1   PROGRAM Front_Exit_Station
2   VAR
3       Box_At_Front_Convey                 : BOOL ;
4       Ons17_Forward_Entry                 : R_TRIG ;
5       Ons18_Exit_Front                    : R_TRIG ;
6       Ons19_Re_Energize                   : F_TRIG ;
7       Ons20_Counter                       : R_TRIG ;
8   END_VAR
9
```

```
1   (*
2   * File: Front Exit Conveyor
3   * Author: Jaime Calvente Mieres
4   * Date: 13-08-2022
5   * Description: Program to control the front exit path of the boxes.
6   *)
7
8
9   (*
10  * If the systme is active and sensor at left entry
11  * fires up, activate the conveyor and count one box.
12  * If the Exit sensor Negative edge detects a box,
13  * decrease the counter by one and check if conveyor
14  * needs to be stopped or not.
15  *)
16  IF System_Active THEN
17      // One shots
18      Ons17_Forward_Entry ( CLK := At_Forward_Entry ) ;
19      Ons18_Exit_Front ( CLK := At_Exit_Front ) ;
20      Ons20_Counter ( CLK := At_Forward_Entry ) ;
21
22      // Convey Activation conditions
23      IF Ons19_Re_Energize . Q AND ( Front_Counter <> 0 OR At_Forward_Entry )
     OR Ons17_Forward_Entry . Q THEN
24          // Activate conveyor,
25          M_Front_Convey := TRUE ;
26      END_IF
27
28      // Set box at convey and increment counter
29      IF Ons20_Counter . Q THEN
30          //Box_At_Front_Convey := TRUE;
31          Front_Counter := Front_Counter + 1 ;
32          Front_Count := Front_Count + 1 ;
33      END_IF
34
35      // Counter decrement and Box at convey deactivation
36      IF Ons18_Exit_Front . Q THEN
37          //Box_At_Front_Convey := FALSE;
38          // Check the counter to decrease the counter
39          IF Front_Counter <> 0 THEN
40              Front_Counter := Front_Counter - 1 ;
41          // Check the counter to deactivate the Convey
42          ELSIF Front_Counter = 0 THEN
43              M_Front_Convey := FALSE ;
44          END_IF
45      END_IF
```

```
46
47      END_IF
48
49      (* Conditions to Re-Start the program after
50      a soft stop *)
51      Ons19_Re_Energize ( CLK  :=  Soft_Stop_Active ) ;
52      IF  Soft_Stop_Active  THEN
53          M_Front_Convey  :=  FALSE ;
54      END_IF
55
56
57
```