

README

PLC - Gummygum production system: " Best Gelato"

Description

The factory produces two types of Gummygum packages: Regular and Pinuk. The package type is determined by the Analog Input1 value. If $0 \leq \text{input} \leq 5$, a Regular package is produced; if $6 \leq \text{input} \leq 10$, a Pinuk package is produced.

The production process comprises 4 main stages: Making ice cream flavors, cooling the ice creams, mixing and packing.

Dependencies

Gx Works2

Program Interaction

1. Open the attached file.
2. Navigate to the online tab and select 'PLC memory operation.'
3. Click 'clear PLC memory.'
4. Access the Compile tab and choose 'Rebuild All.'
5. Go to the Online tab and select 'Write to PLC.'
6. Press 'Start Monitoring.'
7. Access the Online tab and choose 'Remote Operation(s).'
8. Click 'RUN.'
9. Fill the desired inventory in the 'Watch 1' window (located in the bottom-right corner).
10. To initiate the plan, press the button X7.

Gummygum packages production Instructions

1. Choose the Gummygum package type by entering the desired value into Analog Input1.
2. Pull switch X1 to transfer the Gummygum package type and initiate the first stage.
3. Wait until the Y0 light ball turns off (5 seconds).
4. Pull switch X2 to start the cooling stage.
5. Wait until light balls Y2 turns off (8 sec) or turn on X3 (indicating that the temp sensor is under 10 degrees).
6. Wait until the Y5 and Y6 light ball turns off (3 seconds for regular package and 5 seconds for Pinuk).

6. Pull switch X4 to begin the packing stage.

7. Toggle switch X0 up and down seven times to pack 7 cones. The Y4 light ball will turn on while packing and turn off after packing 7 cones.

- The light ball Y7 will remain on throughout the workday.

- The day will end if the inventory levels fall below the required amount for all Gummygum package type.

- In case of an emergency, press button X5 to immediately terminate the workday.

- At the end of each workday, the total number of packages produced will be displayed on the screen (in format of 0.X for X produced packages).

- At the end of each workday, It's possible to start another work day by pressing X7 again and going back to the first step of the Instructions.

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