Readme

PLC - Beer Production System

Description

The factory produces two types of beer: Lager and Pilsner. The beer type is determined by the Analog Input1 value. If 0 ≤ input ≤ 5, a Lager beer is produced; if 6 ≤ input ≤ 10, a Pilsner beer is produced. The production process comprises three main stages: cooking, fermentation, and packaging.

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.

Sixpack Production Instructions

1. Choose the beer type by entering the correct value into Analog Input1.
2. Pull switch X1 to transfer the beer type and initiate the cooking stage.
3. Wait until the Y1 light ball turns off.
4. Pull switch X5 to start the fermentation stage.
5. Wait until light balls Y3 and Y4 turn off.
6. Pull switch X2 to begin the packing stage.
7. Toggle switch X0 up and down six times to pack six bottles.

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

- The day will end if the inventory levels fall below the required amount for the chosen beer type.

- In case of an emergency, press button X11 to immediately terminate the workday.

- Remember to pull all switches down at the beginning of a new six-pack production.

- At the end of each workday, the total number of six-packs produced will be displayed on the screen.

Contributors

- Omer Cohen

- Michaella Eilat

- Hadar Eliav

- Ofir Gutman