Overview

The basic overview of this system is to design a PLC program using ladder logic to control the operation of an irrigation system. The system is designed so that each station (1-6) runs for a 20 second duration. The sequence of the stations is listed in the table below. Depending on the station, either a low or high flow is to be requested from the WSS. Flow indicators are debounced for an appropriate amount of time. Alarms are to be present if valves fail to open or close within a specified time, and if flow indicators are not active within a specified time. The system is not able to run with an alarm present and can be reset by the alarm reset button.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sequence Step** | **Irrigation Target** | **High or Low Flow** | **Time** |
| 1 | 4 | Low | 20s |
| 2 | 1 | Low | 20s |
| 3 | 5 | Low | 20s |
| 4 | 2 | High | 20s |
| 5 | 3 | High | 20s |
| 6 | 6 | Low | 20s |

Calendar

Description automatically generatedTiming chart: