**Project overview:**

Contains five conveyor belts to move product, activating in reverse order (e.g., 5,4,3,2,1). Product begins on conveyor 1, but successive conveyors must already be activated, so product does not enter onto a stopped conveyor belt. Conveyor belts deactivate in forward order (e.g., 1,2,3,4,5).

**Sequence of operations:**

1. When operator starts the system, belt 5 activates first.
2. Belt 4 starts after 1 second time delay.
3. Belt 3 starts after 1 second time delay.
4. Belt 2 starts after 1 second time delay.
5. Belt 1 starts after 1 second time delay.
6. When operator stops the system; belt 1 stops after 1 second delay.
7. Belt 2 starts after 1 second time delay.
8. Belt 3 starts after 1 second time delay.
9. Belt 4 starts after 1 second time delay.
10. Belt 5 starts after 1 second time delay.

**IO List:**

|  |  |  |  |
| --- | --- | --- | --- |
| Tag name | Description | PLC Address | Tag type |
| B1\_Running | Belt 1 Running | O:0/1 | DO |
| B1\_Fault | Belt 1 Faulted | I:0/1 | DI |
| B1\_Run\_CMD | Belt 1 Command. | O:0/0 | DO |
| B2\_Running | Belt 2 Running | O:0/2 | DO |
| B2\_Fault | Belt 2 Faulted | I:0/3 | DI |
| B2\_Run\_CMD | Belt 2 Command. | O:0/3 | DO |
| B3\_Running | Belt 3 Running | O:0/4 | DI |
| B3\_Fault | Belt 3 Faulted | I:0/5 | DI |
| B3\_Run\_CMD | Belt 3 Command. | O:0/5 | DO |
| B4\_Running | Belt 4 Running | O:0/6 | DI |
| B4\_Fault | Belt 4 Faulted | I:0/7 | DI |
| B4\_Run\_CMD | Belt 4 Command. | O:0/7 | DO |
| B5\_Running | Belt 5 Running | 8:0/8 | DI |
| B5\_Fault | Belt 5 Faulted | I:0/9 | DI |
| B5\_Run\_CMD | Belt 5 Command. | O:0/9 | DO |
|  |  |  |  |

**Alarm List:**

|  |  |  |  |
| --- | --- | --- | --- |
| Tag name | Description | Alarm Type | Alarm Condition |
| B1\_Fault\_ALM | Belt 1 Fault Alarm | Digital | ON |
| B1\_FTS\_ALM | Belt 1 Failed Start Alarm | Digital | ON |
| B2\_Fault\_ALM | Belt 2 Fault Alarm | Digital | ON |
| B2\_FTS\_ALM | Belt 2 Failed Start Alarm | Digital | ON |
| B3\_Fault\_ALM | Belt 3 Fault Alarm | Digital | ON |
| B3\_FTS\_ALM | Belt 3 Failed Start Alarm | Digital | ON |
| B4\_Fault\_ALM | Belt 4 Fault Alarm | Digital | ON |
| B4\_FTS\_ALM | Belt 4 Failed Start Alarm | Digital | ON |
| B5\_Fault\_ALM | Belt 5 Fault Alarm | Digital | ON |
| B5\_FTS\_ALM | Belt 5 Failed Start Alarm | Digital | ON |