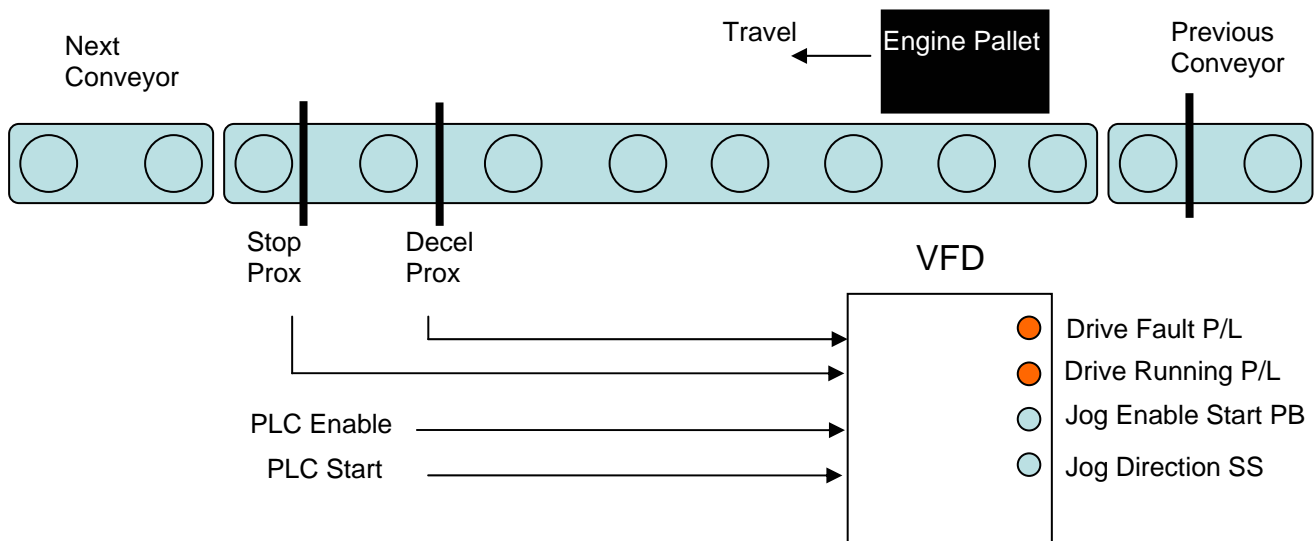


Note: This is a supporting document for file AS_PF40_Multiple_Conveyor.doc

Pallet Conveyor



Overview

The engine assembly line consists of numerous short conveyors strung together to make one long line. Each conveyor is independent of the previous one. All conveyors operate in the same manner, positioning the pallet so that both “decel” and “stop” proximity switches are made. A fast speed is used until the “decel prox” is made, at which time the drive decelerates to a slow speed. When the “stop prox” is made the drive stops, unless the “decel prox” is past. If this happens the drive must automatically reverse at a creep speed until the “decel prox” is seen and then stop. When “Decel prox” and “Stop prox” are made the pallet is considered positioned. The next start signal sends the pallet to the next conveyor. The Jog input can be used for further positioning.

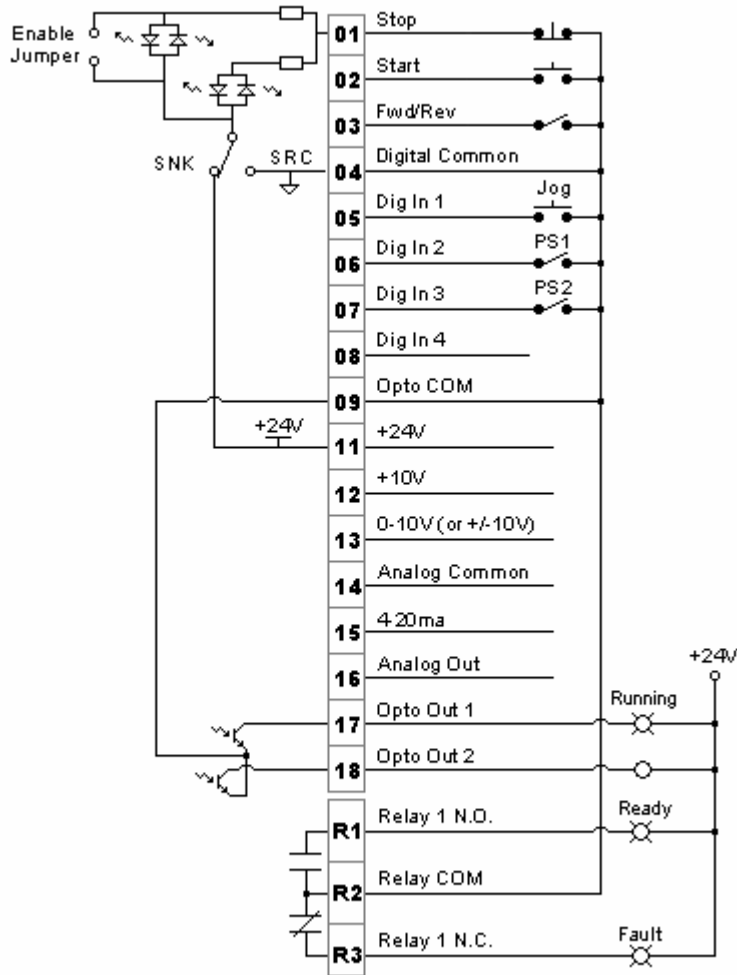
Desired Operation

1. PLC Enable signal is used as a permissive for the drive to run.
2. A momentary start is provided from the PLC controller.
3. Start the drive and run at 70Hz in the forward direction. Running contact closes.
4. When Decel Proximity switch (DPS) is triggered, decelerate drive to 20Hz.
5. Run at 20Hz until Stop Proximity switch (SPS) is triggered, decelerate to stop.
6. If an over travel (past DPS) has occurred, reverse drive at 8Hz until DPS is active.
7. Stop drive.
8. Repeat cycle when start signal provided.

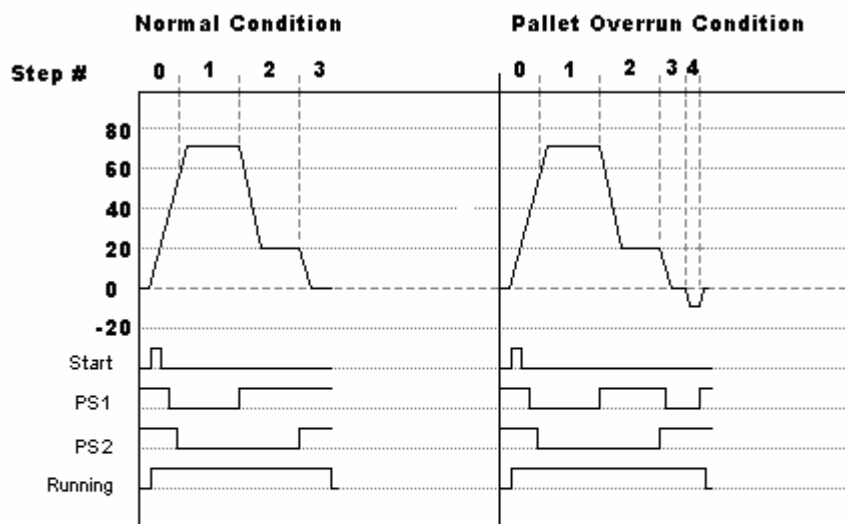
Notes:

- A) A jog forward PB is required for manual control with a selector switch for direction.
- B) Drive Fault and Drive Running signals are required to feed back to controller (PLC).

Control Wiring for Pallet Conveyor



Logic Step Profile for Pallet Conveyor



Notes:

PS1 is the "Decel Prox"

PS2 is the "Stop Prox"

Wiring diagram is shown using "sink" logic.