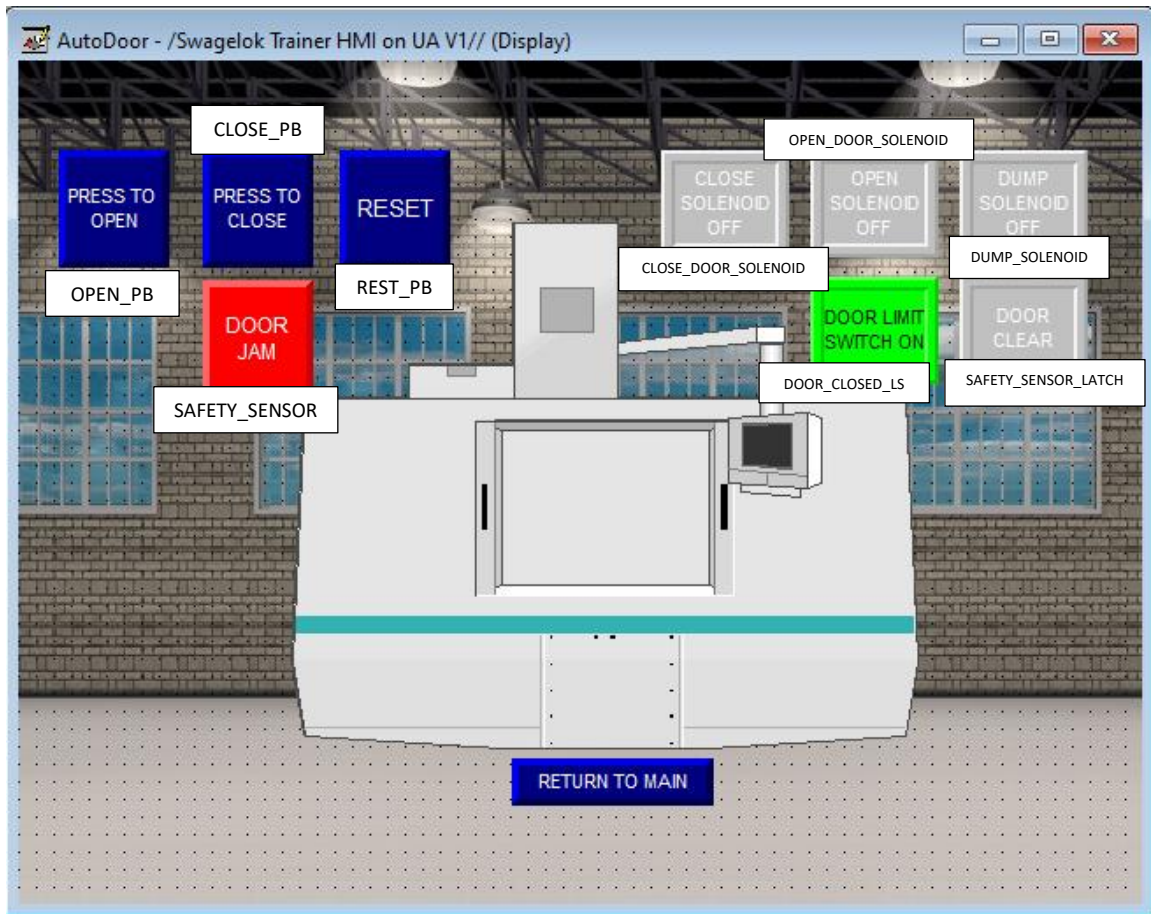# Lab Activity 4
Adding Animations and Expressions

1. Open your "Swagelok_PLC_Trainer" application in FactoryTalkView Studio – View Machine Edition

2. Add the appropriate pushbuttons and display indicators to the AutoDoor display as shown below. Note that only momentary pushbuttons are and multistate indicators are used. The text below each pushbutton/indicator is the tag name for the connection.
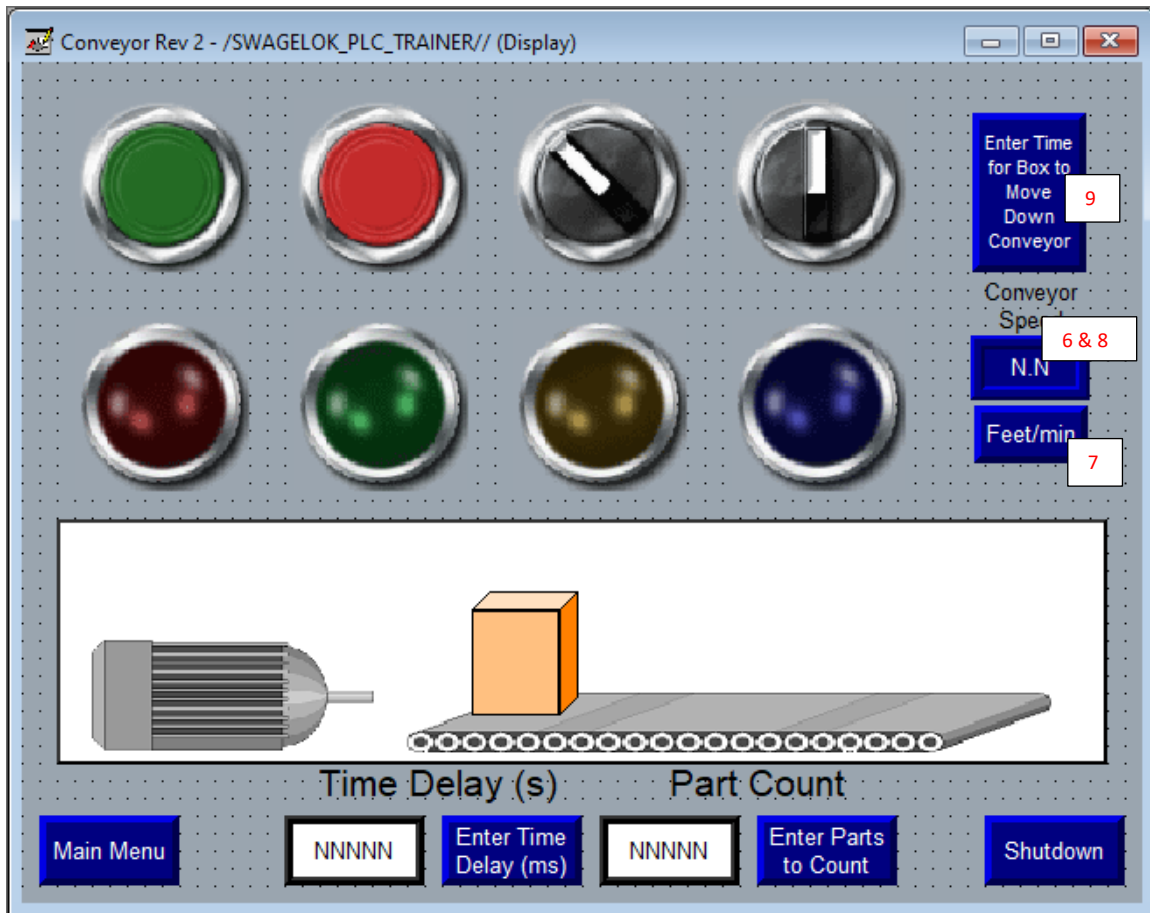

3. Animate the door on the CNC machine opening and closing as shown in the demonstration.

Lab Activity 4

Adding Animations and Expressions

4. Download the Swagelok_PLC_Trainer_Class_7.mer file from the Shared Folder and Restore the application on your computer.
5. Open the Application and modify the Conveyor display as shown below:

6. Add numeric display indicator (and text) to display conveyor speed based on Box Display Timer Setting Preset
   1. Use Expression to convert Timer Preset (in ms) to speed assuming conveyor is 12 ft long
      1. 12 / (({[PLC]Box_Display_Timer.PRE}/1000))*60
7. Add a Maintained pushbutton to specify if conveyor speed is shown in ft/min or meters/min
   1. Tagged to (Feet_OR_Meters) in PLC program
8. Modify numeric display indicator so it shows conveyor speed as either ft/min or meters/min depending on the state of the maintained pushbutton
   1. Use an expression with IF statements
   2. If {[PLC]Feet_OR_Meters} == 0 Then (12 / (({[PLC]Box_Display_Timer.PRE}/1000))*60) Else (3.66/({[PLC]Box_Display_Timer.PRE})*1000*60)
9. Create a Numeric Input Enable Button to Specify (in Seconds) time for the box to travel down the conveyor -- Limit the input from 3 to 10 seconds and USING write expressions convert the value to milliseconds and put in the Box Display_Timer preset.