Lab 6: Introduction to Electropneumatics with S7-1200

# Worksheet by Todd Johns, Dolan Stapleton, and Kyle Bennett

## Controlling the Single-Acting Cylinder

1. Take a picture of your normally-closed single-acting cylinder control circuit and include it below.A black line on a white background

   Description automatically generated
2. Insert a screenshot of your Tag Table below showing the tags “SW1” and “1M1”.

A screenshot of a computer

Description automatically generated

1. Take a picture of your normally-open single-acting cylinder control circuit and include it below.

A black line on a white background

Description automatically generated

1. How does this change affect the behavior of your PLC program? It inverted the action of the single action piston making the piston stay retracted when off and extended when on.

## Controlling the Double-Acting Cylinder

1. Include a screensnip of your PLC code below.

A black rectangle with a white background

Description automatically generated

## CHALLENGE: Timer Operations

**Demonstrate your code for the instructor.**

1. Include a screensnip of your PLC code below.

A screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generated

## CHALLENGE: Counter Operations

**Demonstrate your code for the instructor before cleaning up.**

1. Include a screensnip of your PLC code below.

A screenshot of a computer

Description automatically generatedA computer screen shot of a computer

Description automatically generatedA computer screen shot of a computer

Description automatically generatedA computer diagram with many lines and text

Description automatically generated with medium confidenceA screenshot of a computer

Description automatically generated

**When finished and AFTER your lab has been verified, be sure to place your completed Worksheet in the Dropbox. Neatly clean up your workstation, put away all components in the appropriate Systainers, put all PLC components back in the box, and return the Systainers to the proper stack. You may put your PLC in the clear tote or in the top drawer of your workstation. Put the clear tote back in its space corresponding to your group and kit number. You SHOULD remove the IEEE-488 harness from the PLC, as you will not need it in the following lab.**