Northwest State
Community College

# PLC 210 Hands-On Assessments: Module 8

Student Name: _____ N# _____ Date: _____

This hands-on assessment requires that each student successfully demonstrates each of these tasks to the instructor's satisfaction.  There is no grade for this assessment.

Prior to taking this assessment, the student must pass (minimum of 80%) the Knowledge and Application Assessment.

The student cannot proceed to the HOA for the next module without completing this HOA

**DMM required for completion of HOA**

Create a Project File called HOA_Module_8.ACD using the RSLogix 5000 software.

Use the components on the demo board for the required processor and I/O hardware information in the project file.

Leave all processor and I/O module's Properties at the Default settings.

Program the following Ladder Diagram in MainRoutine

Note: All tags that do not reference an input / output device are DINT Data Type tags.
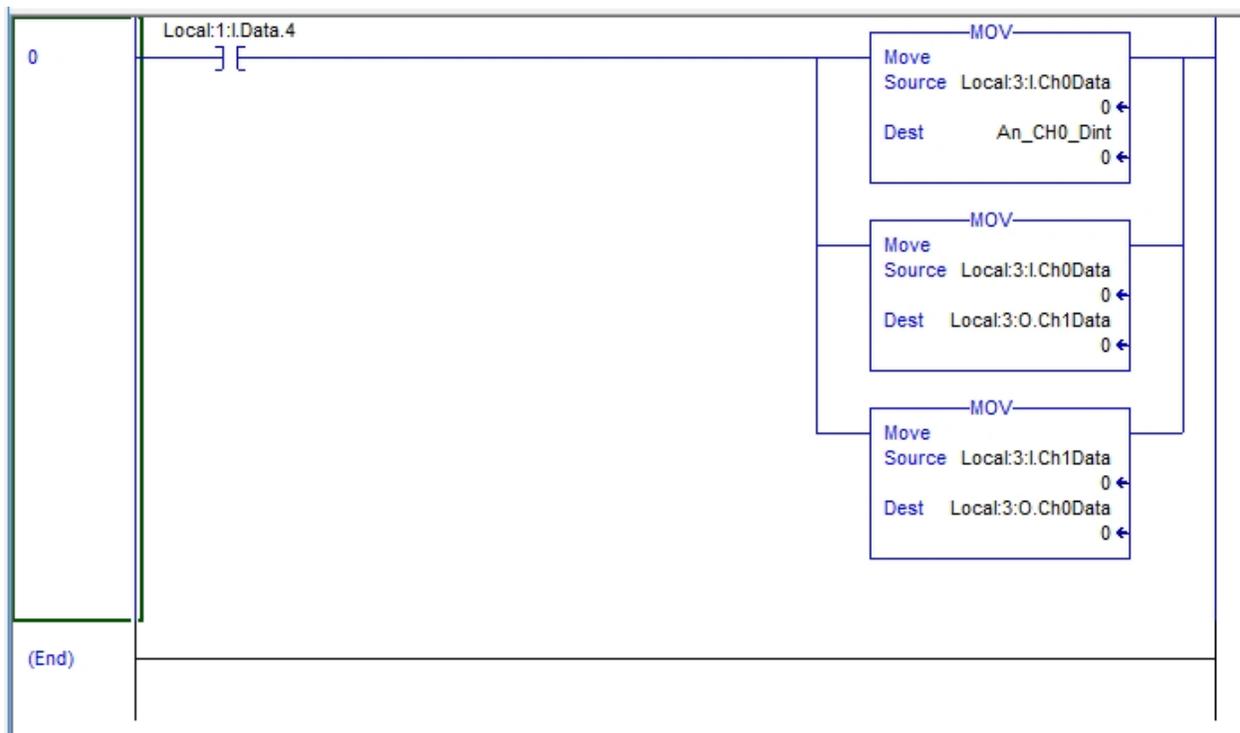


Figure 1. Ladder Diagram for HOA_Module_8.ACD Project File

Note: Be specific in answering questions on tag values.

Download the project file HOA_Module_8.ACD to the CompactLogix demo.
Ensure all demo inputs are OFF / False – Selector Switches turned to left.
Place processor in RUN mode

_____ 1. Navigate to / Open the MainRoutine in the MainProgram
What is the value of the of the input channel's tags?
Local:3:I.Ch0Data:_____
Local:3:I.Ch1Data:_____

Turn upper potentiometer (to the right of PL7) fully to the right.
Do any of the display's status bars change? _____
Which status bar?_____
What is the value of the of the input channel's tags?
Local:3:I.Ch0Data:_____
Local:3:I.Ch1Data:_____

Turn lower potentiometer (to the right of SS7) fully to the right.
Do any of the display's status bars change? _____
Which status bar?_____
What is the value of the of the input channel's tags?
Local:3:I.Ch0Data:_____
Local:3:I.Ch1Data:_____

_____ 2. Configured DMM configured to measure VDC
Monitor terminals V in 0+ and V/I in 0 -
Which potentiometer changes the voltage signal at terminal V in 0 +  and V/I in 0 -?

_____

Monitor terminals V in 1+ and V/I in 1 -
Which potentiometer changes the voltage signal at terminal V in 1 +  and V/I in 1 -?

_____

What is the range of voltage from the potentiometers?_____

_____  3.  Navigate the MainRoutine in the MainProgram
Toggle the selector switch to the right that conditions the MOV instructions.
Which selector switch controls the MOV instructions?_____

What is the value of the of the input channel's tags?
Local:3:I.Ch0Data:_____
Local:3:I.Ch1Data:_____

Turn upper potentiometer (to the right of PL7) fully to the right.
Do any of the display's status bars change? _____
Which status bar?_____
What is the value of the of the input / output channel's tags?
Local:3:I.Ch0Data:_____
Local:3:I.Ch1Data:_____
Local:3:0.Ch0Data:_____
Local:3:0.Ch1Data:_____

Turn lower potentiometer (to the right of SS7) fully to the right.
Do any of the display's status bars change? _____
Which status bar?_____

What is the value of the of the input / output channel's tags?
Local:3:I.Ch0Data:_____
Local:3:I.Ch1Data:_____
Local:3:0.Ch0Data:_____
Local:3:0.Ch1Data:_____

Why are there no values in the tags for the analog module?
Explain:_____
_____

_____  4.  Configure the analog module so that when SS4 is ON (turned to the right),
values appear in the channel tags for the 1769-IF4XOF2 module.

Explain what is required to get the module operational:
_____
_____

_____ 5. The upper potentiometer (to the right of PL7) is connected to which analog input channel? _____

The lower potentiometer (to the right of SS7) is connected to which analog input channel? _____

The upper potentiometer (to the right of PL7) is controlling which analog output channel? _____

The lower potentiometer (to the right of SS7) is controlling which analog output channel? _____

_____ 6. What is the Data Type for the analog module's input tags?_____

What is the range of values for the input channel? _____

What is the Data Type for the analog module's output tags?_____

What is the range of values for the output channel? _____

_____ 7. Turn the upper potentiometer so the display status bar reads 0V scale

What is the value of the module's tag?_____

Configured DMM configured to measure VDC

Monitor terminals V in 0+ and V/I in 0 -

What voltage value is shown on the DMM? _____

Turn the upper potentiometer so the display status bar reads half scale

What is the value of the module's tag?_____

Configured DMM configured to measure VDC

Monitor terminals V in 0+ and V/I in 0 -

What voltage value is shown on the DMM? _____

Turn the upper potentiometer so the display status bar reads full scale - 10V

What is the value of the module's tag?_____

Configured DMM configured to measure VDC

Monitor terminals V in 0+ and V/I in 0 -

What voltage value is shown on the DMM? _____

Explain the relationship between a voltage signal and the value generated by the module's tag value:

_____

_____

_____

_____

**DOL DISCLAIMER:**

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