
Honeywell

PlantScape Controller Implementation

Lesson 1

Configuring a Regulatory Control CM (with simulated I/O)

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Notes

Introduction

The purpose of this Lesson is to give you the knowledge to be able to create and configure a regulatory control CM with simulated I/O. After you complete this Lesson you will have configured a regulatory control valve to control the flow of tank A into the reactor.

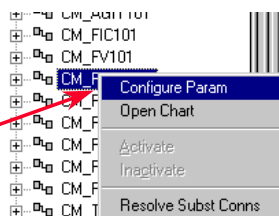
Objectives

- ❶ Create a new CM named **CM#_FV101RC**
- ❷ Modify the CM as needed to control the flow of tank A to the reactor
- ❸ Operate your newly created CM from station



Adding and Configuring a New CM

- Copy **CM#_FIC101**
- Rename **CM#_FV101RC**
- Select then right click on the new CM
- Select
 - **Configure Parameters**
- Modify the settings to match the information below:
 - **Main Tab**
 - Name **CM#_FV101RC**
 - Description **A XFER FLOW CTRL**
 - Engr Units **GPM**
 - Keyword **A FLOW CONTROL**
- Click **OK**
- Assign **CM#_FV101RC** to **CEE0101**



| | |
|--------------|------------------|
| Name: | CM_FV101RC |
| Description: | A XFER FLOW CTRL |
| Engr Units: | GPM |
| Keyword: | A FLOW CTRL |

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Notes

Adding and Configuring a New CM

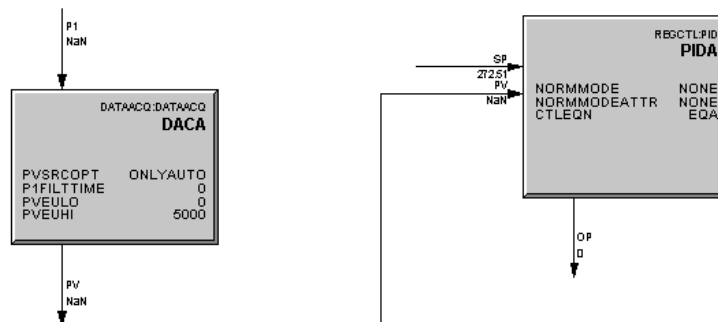


Before any Function Blocks are inserted to the CM it is good practice to assign the CM to the corresponding CEE. This will enable you to completely configure the I O Channel Function Blocks without having to close and reopen the CM.

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Modifying CM#_FV101RC

- Open CM#_FV101RC
- Delete the following blocks*
 - AICHANNEL
 - AOCHANNEL
- Arrange blocks as shown below



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Notes

Modifying for Soft Wired Output-to-Input Simulation

CM#_FIC101 used real IO with the analog outputs hard wired to the analog inputs. In this exercise, we demonstrate a different method of simulation.

* Here we will use soft wiring to connect output to input. This method is convenient to use because it requires no real IO modules.

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Modifying CM#_FV101RC ...continued

- Double click on the **DACA** Function Block and change the following settings on the **Main** tab

- PVEU Range Hi **100**
- PVEU Range Lo **0**
- PV Limits Hi **100**
- PV Limits Lo **0**

| | |
|---------------------|----------------------------------|
| PVEU Range Hi : | <input type="text" value="100"/> |
| PVEU Range Lo : | <input type="text" value="0"/> |
| PV Limits Hi : | <input type="text" value="100"/> |
| PV Limits Lo : | <input type="text" value="0"/> |
| Low Signal Cut Off: | <input type="text" value="NaN"/> |

- Double click on the **DACA** Function Block and change the following settings on the **Alarms** tab

- PV High High **95** **Urgent** **0**
- PV High **85** **High** **0**

| Alarm Limits | Trip Point | Priority | Severity |
|----------------|---------------------------------|-------------------------------------|--------------------------------|
| PV High High : | <input type="text" value="95"/> | <input type="text" value="URGENT"/> | <input type="text" value="0"/> |
| PV High : | <input type="text" value="85"/> | <input type="text" value="HIGH"/> | <input type="text" value="0"/> |

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Notes

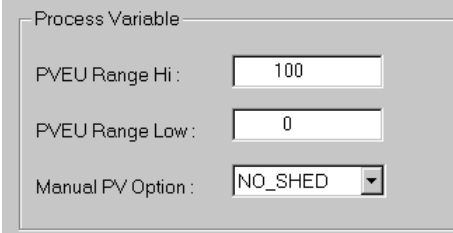
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Modifying CM#_FV101RC ...continued

- Double click on the **PIDA** Function Block and change the following settings:

- **Main** tab

- PVEU Range Hi **100**
- PVEU Range Low **0**
- Manual PV Option **NO_SHED**



Process Variable

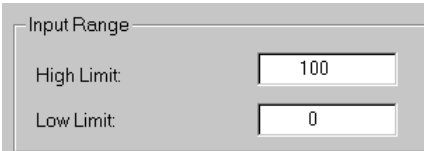
PVEU Range Hi : 100

PVEU Range Low : 0

Manual PV Option : NO_SHED

SetPoint Tab

- High limit **100**
- Low limit **0**



Input Range

High Limit: 100

Low Limit: 0

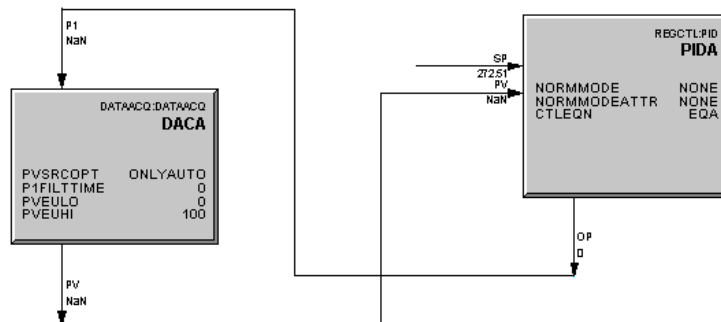
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Notes

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Modifying CM#_FV101RC ...continued

- Wire the blocks together in this manner
- Close and save changes to **CM#_FV101RC**
- **Load** and **Activate** **CM#_FV101RC**



- Configure **CM#_FV101RC** in station to group #3 slot 2 and verify that it is operational

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Notes

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This completes....

PlantScape Controller Implementation

Lesson 1

**Configuring a Regulatory Control CM
(With Simulated IO)**

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Notes
