
Honeywell

PlantScape Controller Implementation

Lesson 5

Creating Handlers

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Notes

Introduction

The purpose of this Lesson is to give you the knowledge to be able to configure Handlers. Upon completion of this lesson you will have configured working Check and Abort handlers.

Objectives

- ❶ Configure a Check Handler
- ❷ Configure an Abort Handler

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➤ Configuring an Abort Handler

- Open the **SCM#_TEMP**
- From the **Library** view drag a Handler into the **SCM#_TEMP**
- This will bring up the Parameter configuration screen. Enter the following information
 - Name **ABORT**
 - Description **ABORT**
- From the dropdown menu select **ABORT**
- Click **OK**
- You will see a new tab in the lower left hand corner of the Control Drawing area, this represents the new Handler



The screenshot shows a configuration window with three fields: 'Name' with the value 'ABORT', 'Description' with the value 'ABORT', and 'Handler Type' with a dropdown menu showing 'ABORT'.



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Configuring a Handler

From this selection box you can select any different type of Handler that is available. Every time you create a new Handler a new tab will be added to the bottom of the Control Drawing area. This will enable you to toggle between the different Handlers.

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➤ Adding and Configuring a Transition (for the Abort Handler)

- Ensure you have the **ABORT** tab at the bottom of your screen selected
- Configure the following information on the Invoke **Transition**

Tab	Name	Description
Main	INVOKE_ABORT	INVOKE_ABORT
	Description	Condition Expression Gate
Condition #1	TEMP PV HI HI	CM#_TIC101.DACA.PVHHALM.FL =1 P1
Condition #2		
Condition #3		
Condition #4		
	Pri Gate (1)	Pri Gate (2) Pri Gate (3) Secondary Gate
Gates	CONNECT	CONNECT

- Click **OK**

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Start Conditions

The Abort handler will not interfere with the function of the SCM until the start condition is met. In this case we are working with a Temperature SCM so the Abort Handler will be activated if the High High Alarm is triggered. We have accomplished this by using the condition

CM#_TIC101.DACA.PVHHALM.FL = 1

This condition will hold the Abort Transition in the Invoke position until CM#_TIC101's PV High High alarm is triggered on the DACA block



➤ Adding and Configuring a Step (for the Abort Handler)

- Scroll down in the **ABORT HANDLER** to a fresh screen
- Drag and drop a Step from the **Library** tab into the SCM control drawing and position it under the **INVOKE_ABORT** Transition

Tab	Name		Description	
Main	COOL_AND_DRAIN		COOL AND DRAIN	
	Wait Time	0	Active Time	240
	Description		Output Expression	
Out #1	ENSURE MODEATTR FIC101 PROG		CM# FIC101.PIDA.MODEATTR := 2	
Out #2	CM# FIC101 MODE TO MAN		CM# FIC101.PIDA.MODE := 0	
Out #3	SET CM# FIC101 OP		CM# FIC101.PIDA.OP := 5.0	
Out #4				

- Click **OK**
- Wire the **INVOKE_ABORT Step** to the **COOL_AND_DRAIN Transition**

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Notes

Abort Handler's Content

The next part of this abort will be to configure a Step to resolve our alarm. We have configured our Step to cool the Reactor. The process will be to ensure CM#_FIC101 can be controlled by the SCM and then lower the temperature.



➤ **Start Conditions (for the Abort Handler)**

- Scroll down in the **ABORT HANDLER** to a fresh screen
- Drag and drop a Transition from the **Library** tab into the SCM control drawing and position it under the **COOL_AND_DRAIN** Transition

Tab	Name		Description
Main	ABORT_WAIT_TEMP		ABORT_WAIT_TEMP
	Description		Condition Expression Gate
	Condition #1	WAIT 55 DEG C	CM#_TIC101.PIDA.PV <= 55.0 P1
	Condition #2		
	Condition #3		
Gates	Pri Gate (1) Pri Gate (2) Pri Gate (3) Secondary Gate		
	CONNECT		CONNECT

- Click **OK**
- Wire the **COOL_AND_DRAIN** Step to the **ABORT_WAIT_TEMP** Transition
- Close and save changes to the **SCM#_TEMP**

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➤ Configuring a Check Handler

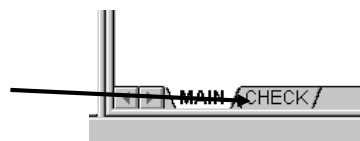
- Open the **SCM#_REACTR**
- From the **Library** view drag a Handler into the **SCM#_REACTR**
- This will bring up the Parameter configuration screen. Enter the following information
 - Name **Check**
 - Description **Check**
- From the dropdown menu select **CHECK**
- Click **OK**
- You will see a new tab in the lower left hand corner of the Control Drawing area, this represents the new Handler

Name: HANDLER24

Description: CHECK

Handler Type: CHECK

NULL
EDIT
MAIN
CHECK
INTERRUPT



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Configuring a Handler

From this selection box you can select any different type of Handler that is available. Every time you create a new Handler a new tab will be added to the bottom of the Control Drawing area.

NOTE: Refer back to the Introduction to SCMs section for review of Handler types.



➤ Adding and Configuring a Step (for the Check Handler)

- Ensure you have the **CHECK** tab at the bottom of your screen selected
- Drag and drop a Step from the **Library** tab into the SCM control drawing and position it under the **Invoke Check** Transition

Tab	Name	Description
Main	SETUP	SETUP
	Wait Time 0	Active Time 240
	Description	Output Expression
Out #1	MODEATTR SCM# XFERA TO PGM	SCM# XFERA.MODEATTR := 2
Out #2	MODEATTR SCM# TEMP TO PGM	SCM# TEMP.MODEATTR := 2
Out #3	DRAIN VALVE MODEATTR TO PGM	CM# FV103.DEVCTLA.MODEATTR := 2
Out #4	DRAIN PUMP MODEATTR TO PGM	CM# PMP103.DEVCTLA.MODEATTR := 2
Out #5	DRAIN TOTALIZER TO PGM	CM# ACCA.TOTAL_REACTR.CMDATTR := 0
Out #6	A TOTALIZER TO PROGRAM	CM#_ACCA.TOTAL_A.CMDATTR := 0
Out #7	B TOTALIZER TO PROGRAM	CM#_ACCA.TOTAL_B.CMDATTR := 0
Out #8	RESET B TOTALIZER	CM#_ACCA.TOTAL_B.COMMAND := 3
Out #9	RESET DRAIN TOTALIZER	CM#_ACCA.TOTAL_REACTR.COMMAND := 3
Out #10	RESET INGR B SIGNAL	CM#_FLAGS.ING_B.PVFL := 0
Out#11	RESET TOTAL_A	CM#_ACCA.TOTAL_A.COMMAND := 3

- Click **OK**
- Wire the **Invoke_Main** Transition to the **SETUP** Step

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Notes

Configuring a Check Handler

In this Check Handler we are resetting all the totalizers and setting all the components needed to Program mode. This will allow us to run the process problem free.



➤ **Loading, Activating and Operation you new SCMs**

- Inactivate the **SCM#_TEMP**
- Load and Activate the following SCMs
 - **SCM#_TEMP**
 - **SCM#_REACTR**
- In **Station**, add **SCM#_REACTR** to **Group #4, Slot 7**
- Operate the **SCM#_REACTR** from station with the **ING_B** flag on and off to test branching functionality.
- After it completes click on the **History Values** tab. Note the totals of Ingredient A, B and Product

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This completes....

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