

14 *Process Alarm Display Lab*

2.1 Foreword

In most process control applications, the user wishes to detect, view and acknowledge alarm conditions from the front panel of the instrument. MOD 30ML provides extensive, flexible alarm information, which is completely configurable and extremely easy to define. This lab will teach you how to define and display process and deviation alarms using the Process Alarm Display blocks.

2.2 Objectives

In this lab, we will add a high and low alarm to the PID loop you configured in the earlier lab. Ensure you have loaded the file with the PID loop.

Using the Process Alarm Display blocks, defining the alarms and creating the displays are the same activity.

2.3 Instructions

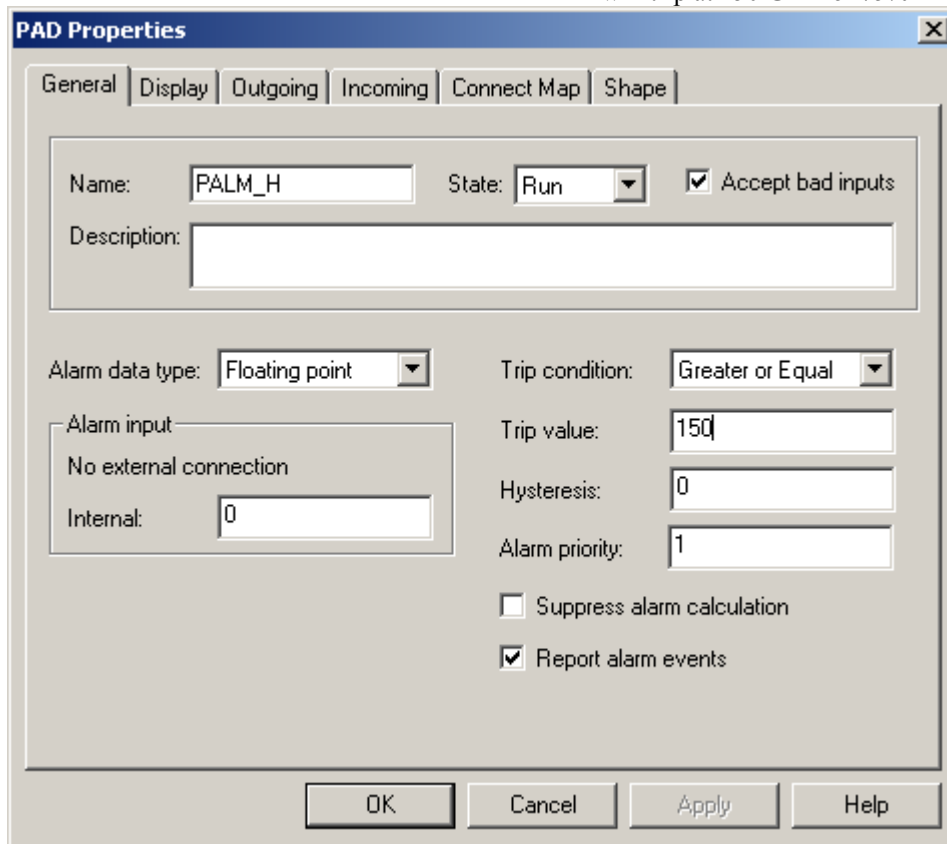
A - LOAD A PROCESS ALARM DISPLAY BLOCK

Step	Procedure	Comments
1.	Make sure your PID block is visible on the screen.	
2.	From the Algorithm library menu, select PAD (Process Alarm Display)	
3.	Drag the box onto the screen and fix it in place by clicking the left mouse key. Move and size the block so it is in an appropriate area of your screen.	You should now have a block on your screen called PAD

Process Alarm Display Lab

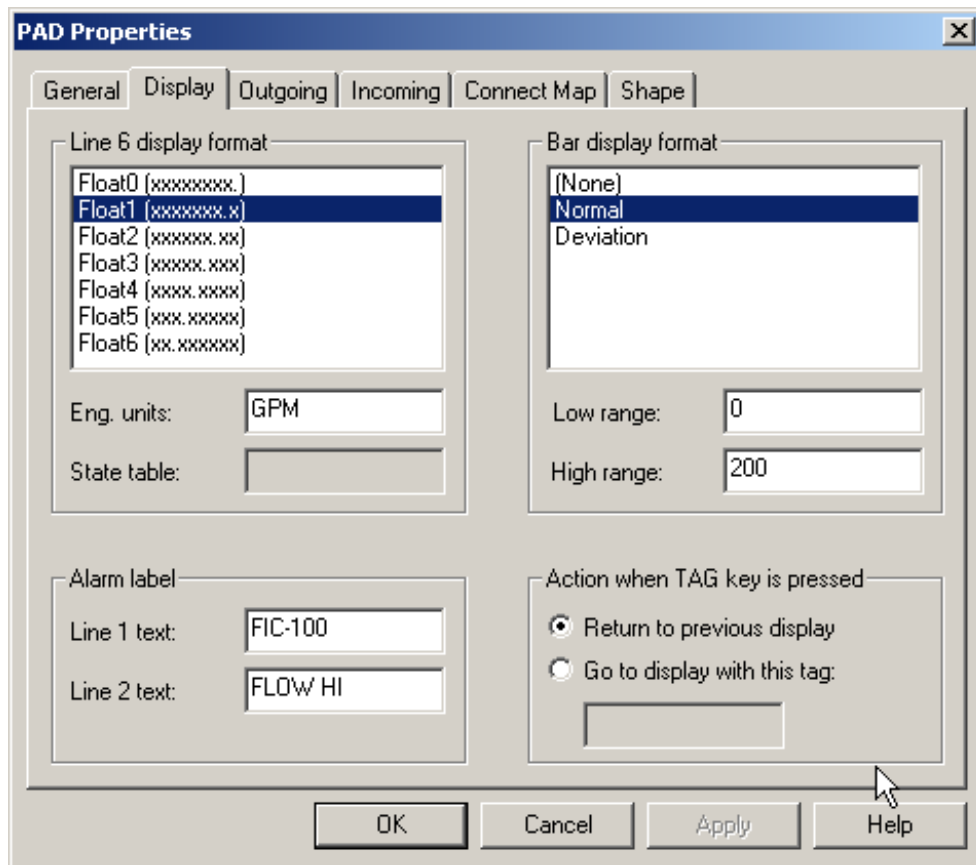
B - CONFIGURE A HIGH PROCESS ALARM

- | Step | Procedure | Comments |
|-------------|--|---|
| 4. | Double-click on the PAD block to open it | Refer to the next figure. |
| 5. | Enter the tag name PALM_H in the Name field. | |
| 6. | Using the pull-down menu, change the Trip Condition to Greater Or Equal | The alarm will activate (trip) when the process value is greater than or equal to the trippoint |
| 7. | Enter a trip value of 150 | Since the flow is 0 to 200 GPM, the alarm will trip at 150 GMP or 75% |



- | | | |
|-----|--|--|
| 8. | Select the Display tab of the PAD block | Refer to the next figure. |
| 9. | Change the Display Format field from “Float 6” to “Float 1” by selecting it with the mouse | The numerical display of the alarm will be floating point with one place to the right of the decimal point |
| 10. | In the Engineering Units field, type GPM | |
| 11. | Select “Normal” for the Bar Format field | The range fields are activated |
| 12. | Leave the Lo Range at the default value of 0 | |
| 13. | Change the Hi Range value to 200 | |

- 14. In the Line 1 Text field, type **FIC-100** This is what will appear on the top line of the alarm display
- 15. In the Line 2 Text field, type **FLOW HI** This is the label that will appear on the second line of the display
- 16. Change the Action button from “Return to previous display” to “Go to display with this tag” and type **FIC-100** (or the Display Tag you used for your PID block) When the alarm page is displayed, pressing the TAG key will automatically take you to the operator display for FIC-100
- 17. Close the block by selecting or pressing OK



C - CONNECT THE BLOCKS

- | Step | Procedure | Comments |
|------|---|--|
| 1 | Select one of the Connection methods from the library | |
| 2 | Click in the middle of the PID block | A menu of possible connections appears |
| 3 | Move the scroll bar until you find the mnemonic PVI (process variable input) and select it | |

Process Alarm Display Lab

- 4 Drag the cursor into the PALM_H block and select the block
- 5 The only possible connection is ALARMINP (alarm input); this is done automatically by ViZapp You now have a line from the PID block to the PALM_H block
- 6 Return to EDIT mode by selecting the arrow on the right toolbar
- 7 To check your connection, open the PAD block and select the INCOMING tab.

D – CONFIGURE A LOW ALARM:

- 1 Using the printout provided, repeat this exercise to configure and connect a low process alarm with the following characteristics:

Block Tag	PALM_L
Display Tag	FIC-100
Line 1 Text	FIC-100
Line 2 Text	FLOW LO
Condition	Less or equal
Value	50
Display Format	Float 1
Range	0 to 200
Engineering Units	GPM

E – COMPILE THE DATABASE:

- 1 Save your database.
- 2 Compile and download your configuration. Check your alarms by changing the input to the unit to create the alarm conditions. View and acknowledge the alarms.
- 3 If you are using the MOD 30ML demonstration box, use Pot #2 to vary the “process” input and trigger the alarms.