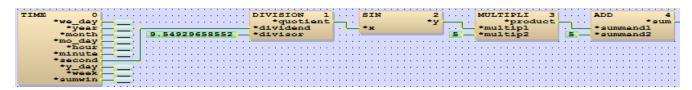
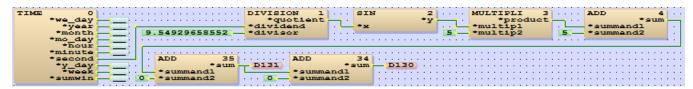
## TT211105 - FUP - Simple Bar Chart

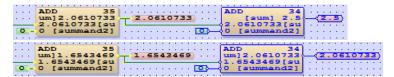
1. In this technical tip, we will show you how to create a simple bar chart in FUP. Before we start, we need to create a simulation value for the input of the chart. The below modules create a sinewave value from 0 to 10.



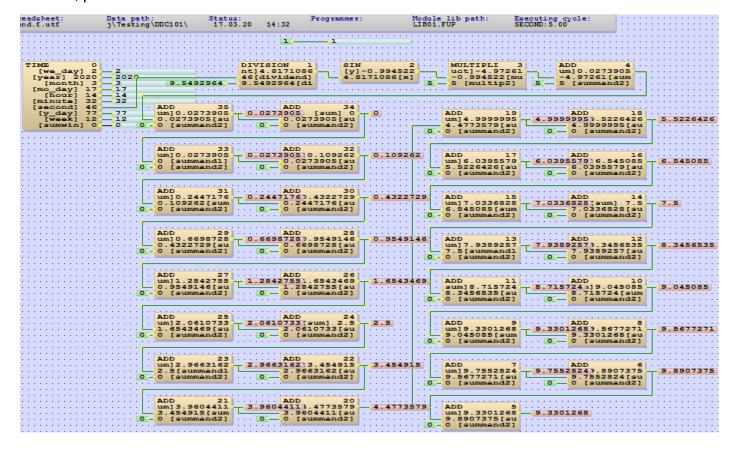
2. Next, we need to store the last values of the sinewave in the FUP page. Using the "ADD" modules with the order number 'reversed", we can achieve this easily.



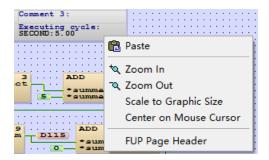
3. You can see the first "ADD" module is no. 35 and the second "ADD" module is no. 34. Try it in simulation, and you can see the last value pass from module 35 to module 34.



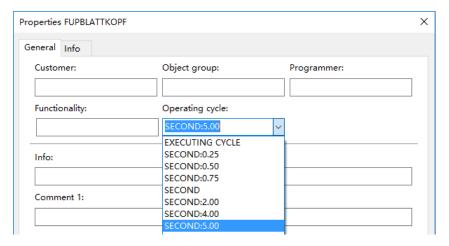
4. By adding more "ADD" modules with the order number "reversed", we store the last 30 values in the FUP page. Note that we've set the "Executing cycle" of this FUP page to 5 seconds, so the values are stored in 5 seconds interval. For more information regarding module order number, please refer to TT200303.



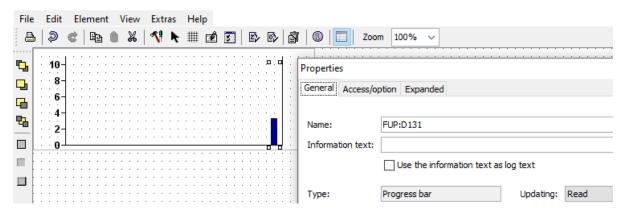
5. To change the "Executing cycle" time, right click on the header and then click on "FUP page Header".



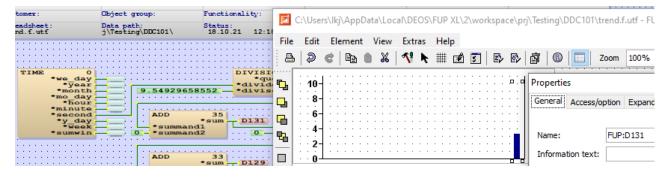
6. The default cycle time is 1 second, and you can change it from 0.25 second to 1 hour. In this example, we change it to 5 seconds.



7. To show the stored values in a bar chart, we use the "Progress bar" graphic elements.



8. Link the bar on the right to the first display in your FUP page.



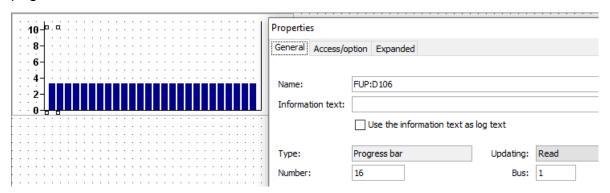
9. Set the position and size according to your chart. Set the "Angle" to 270.

Width:	100
Height:	8
Angle:	270

10. Set the color of the bar as you like, and you can set min/max values and use different colors when it's beyond the limits. Set the "Start value of progress bar" and "Progress bar final value". In this example, we use 0 to 10.

Properties		
General Access/option Expanded		
Properties	Value	Preview
Foreground color when value fell below Min	-16777080	
Background color if the value falls below the min value	136	
Maximum limit value	2000000	2000000
Foreground color if the max value was exceeded	-16777080	
Background color if the max value was exceeded	136	
Start value of progress bar	0	0
Progress bar final value	10	10

11. Copy and paste the "Progress Bar" and link them to the corresponding "Display" in the FUP page.



12. Final result. It's a simple live bar chart that update every 5 seconds.

