SINAMICS drive Commissioning Workshop

- ‘Closed loop’ Bode Analysis
- Current Controller Tuning
- Speed Controller Tuning
- Position Controller Tuning

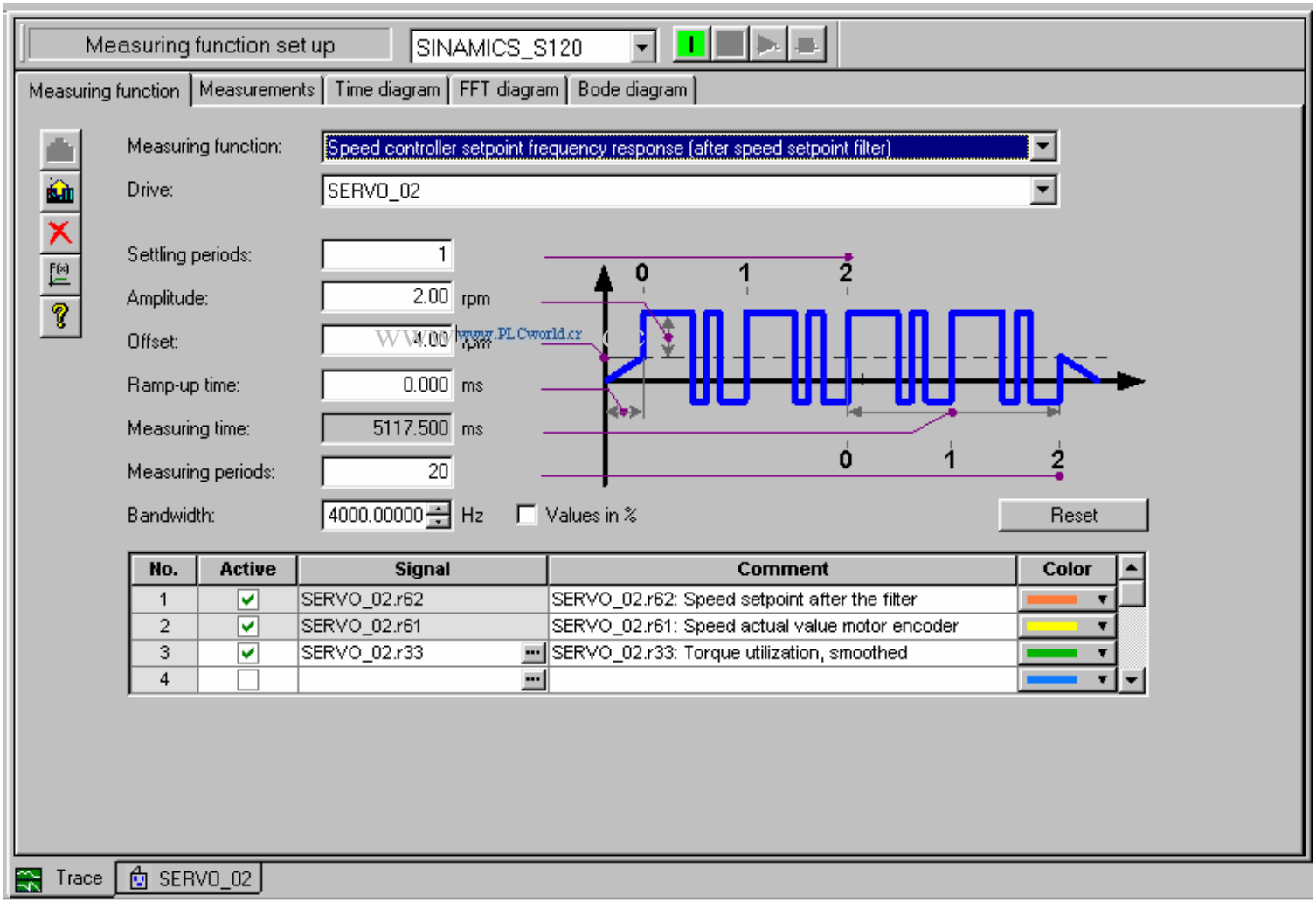
Engineering-Software SIMOTION SCOUT

SINAMICS_S120

Set the Speed controller gain to 0.1(P1460) and int. time to 100msec (P1462). Now select measuring Function 1 from the drop Down Choice

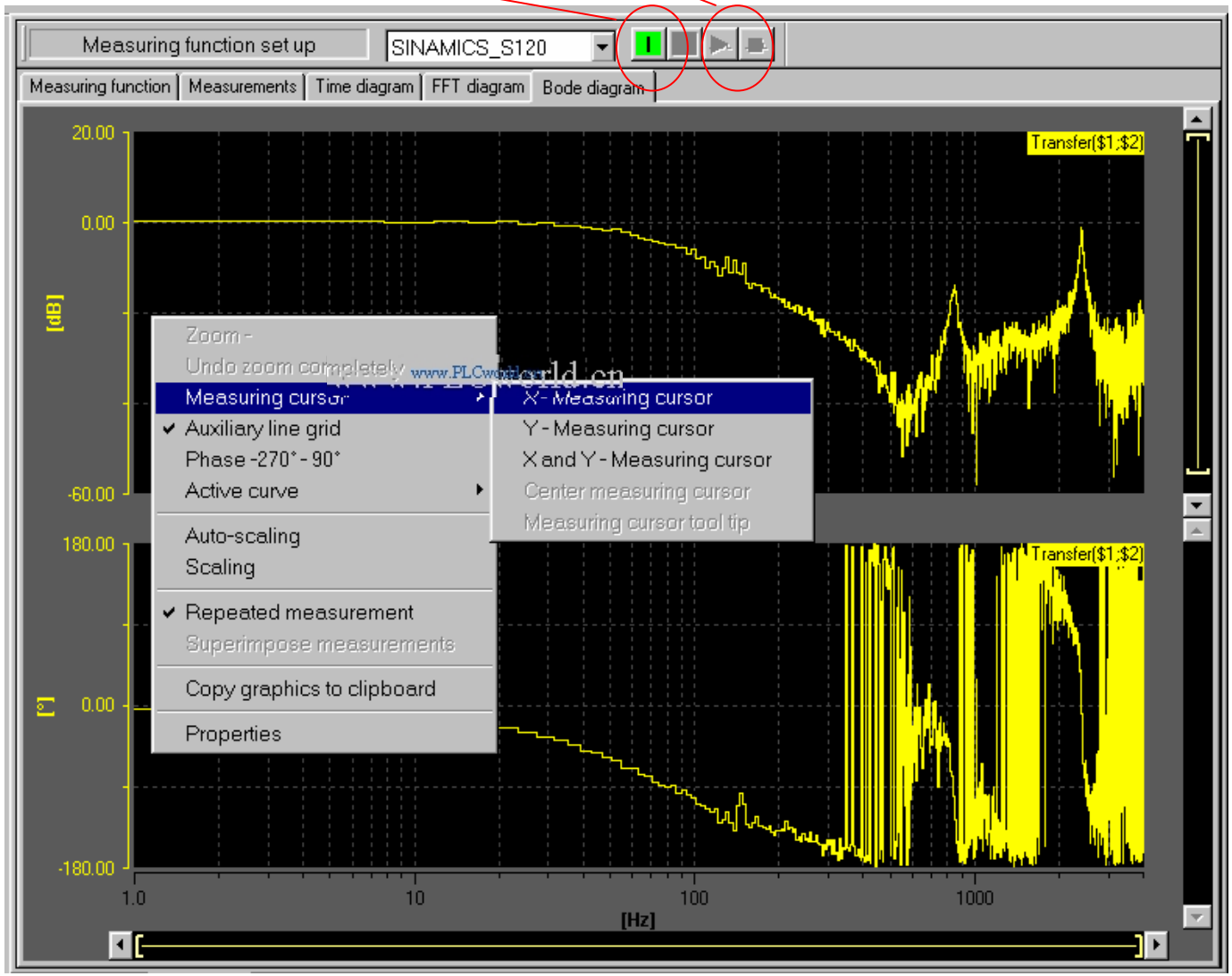
Start with the **first** Measuring function from the drop down list. This function is used to locate the frequency of the Current set point bandwidth filter.

The axis will travel in the positive direction with readings started after the offset. **Reduce the travel with a lower Measuring periods.**



SINAMICS_S120

Start the axis and then Run Trace and use X Cursor to find Frequency of 1st Pole



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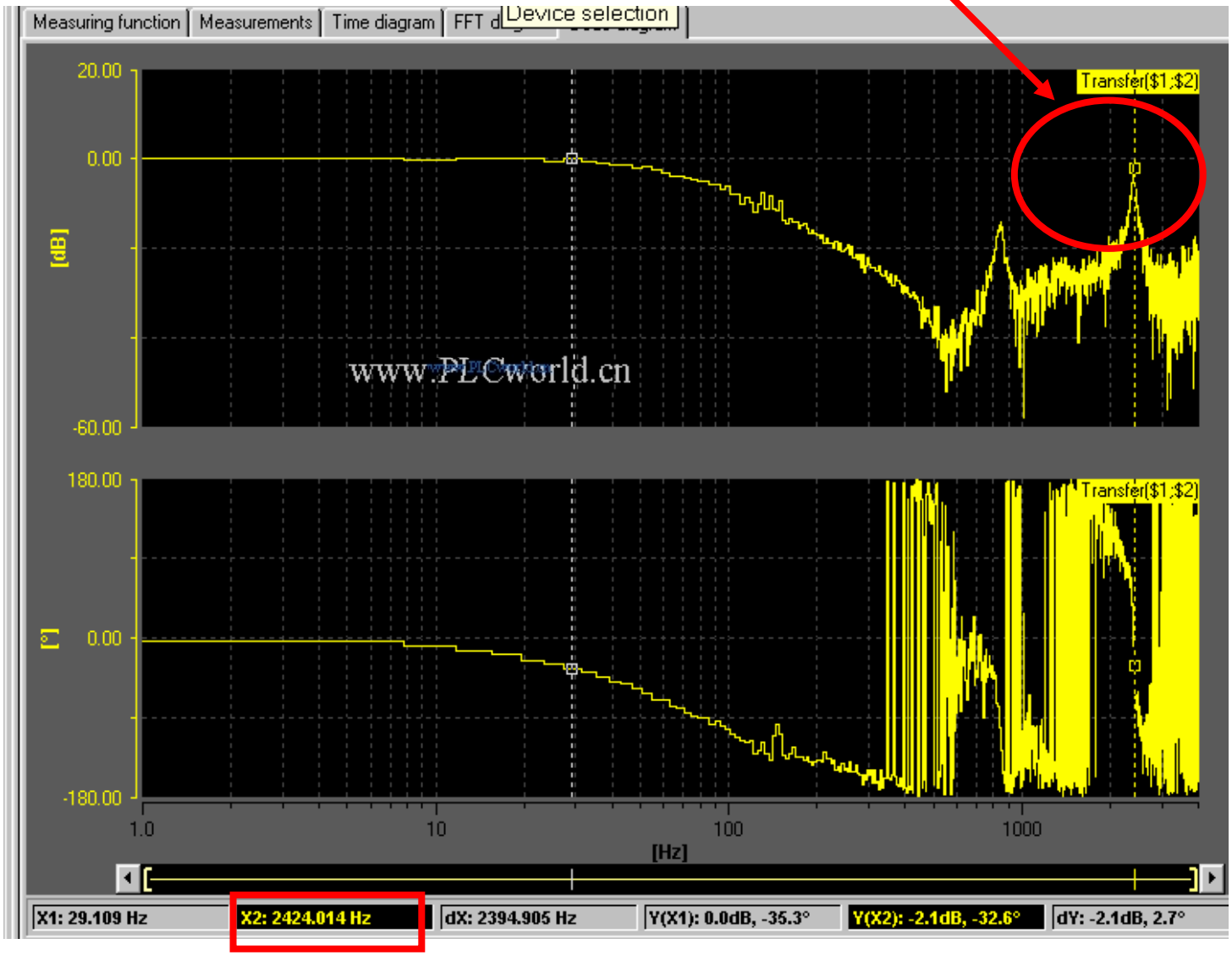
Record Frequency for use in next section



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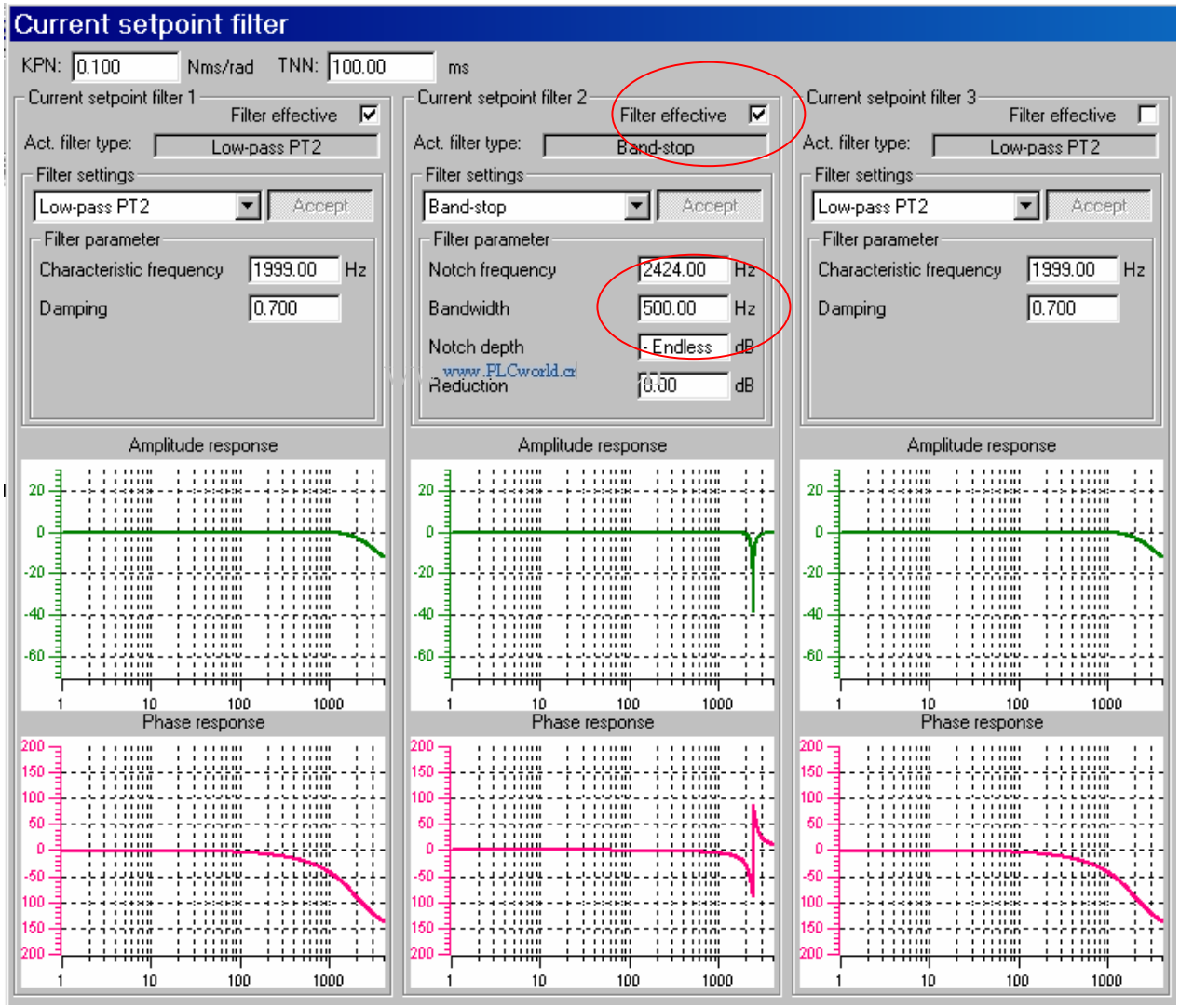
Open Current Setpoint Filter and use Previous value for Notch Frequency.



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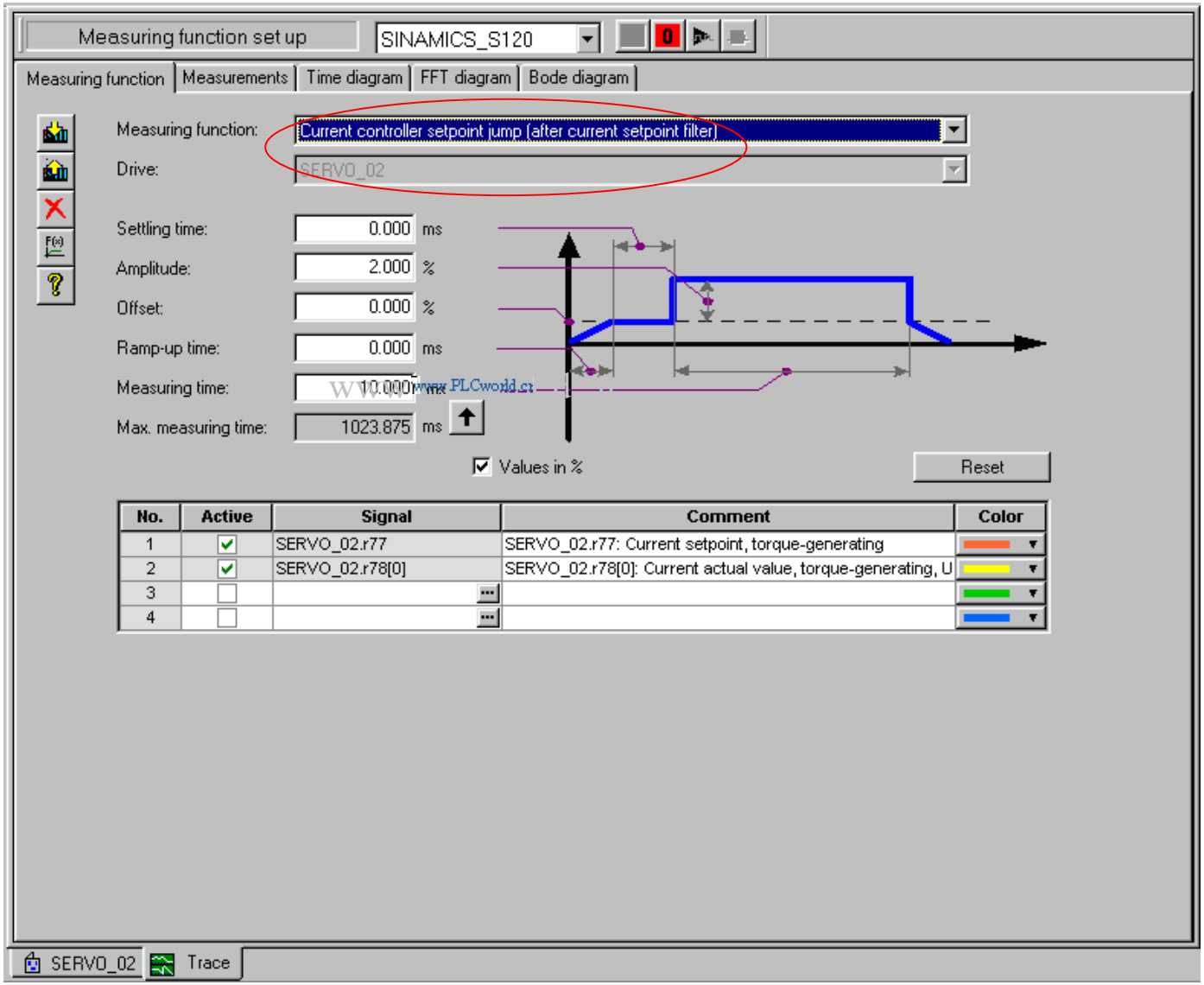
Use this Measuring Function Choice for Next Step

Select the **last** Measuring function from the drop down list. This function is used to optimize the Current Controller P Gain (p1715) and reset (p1717) parameters.



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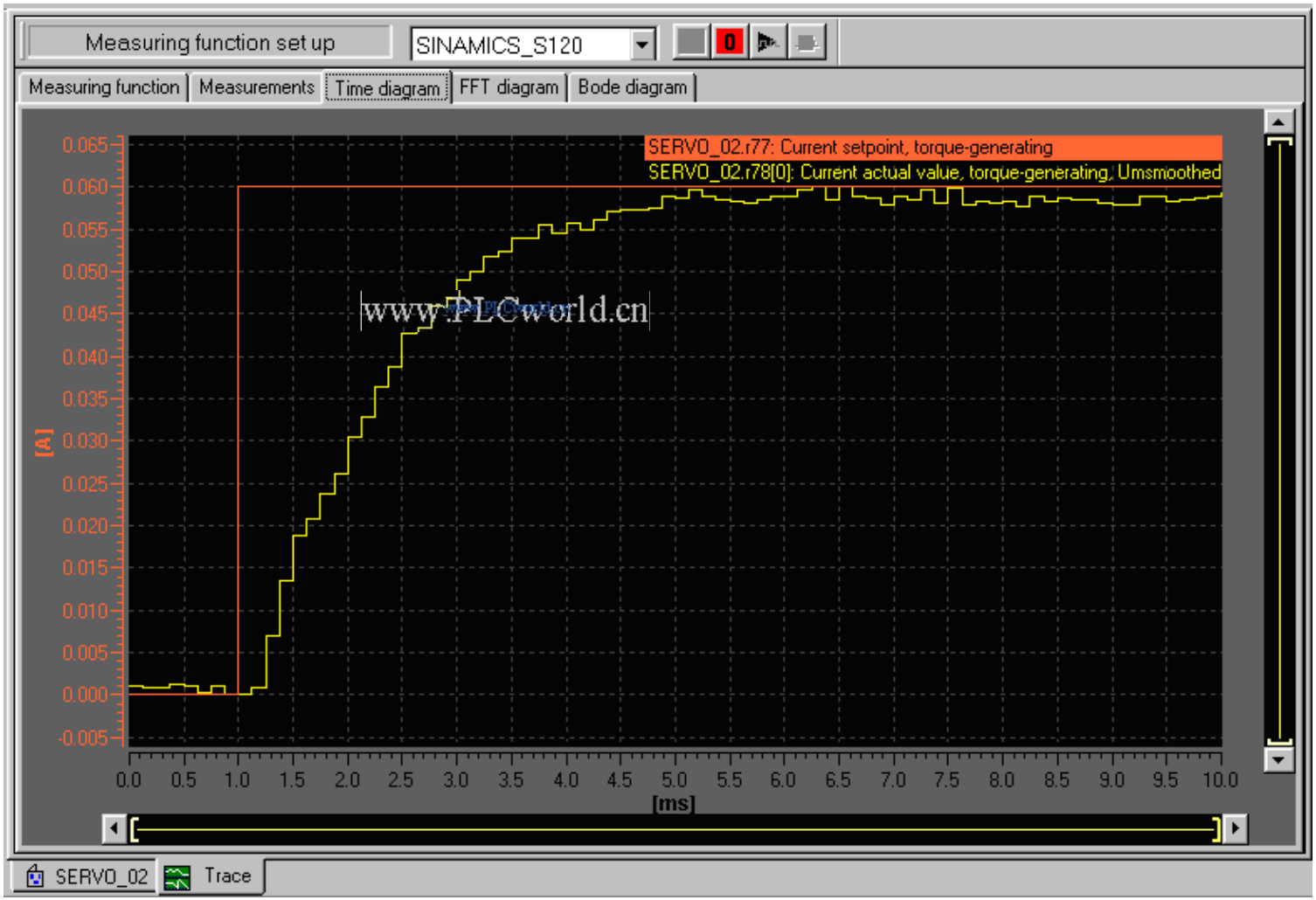
Start the axis and Measuring function again . Now adjust the Current controller gain and Int. times to achieve the desired response P1715 = gain P1717 = int. time.



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Note the default value for the gain and integration time