

Phasors and frequency of three-phase power system may be measured with high speed and accuracy using modern power instruments such as Phasor Measurement Unit (PMU). However, this accuracy may be affected by several power disturbances such as fast and slow dc offsets decaying due to sudden current changes, inter-harmonics, etc. To avoid these effects for improving the quality of measurements, this work proposes a new method of real-time filter for removing the unwanted DC offset and hence improving SDFT algorithm. To validate the present method, the performance of developed PMU is tested using the data generated by Simulink/MATLAB simulator. The obtained simulation results are very encouraging