

Experiment No. 11

11.1 Experiment Name

Simulation on three-phase (abc) to two-phase ($\alpha\beta 0$) transformation system

11.2 Objectives

- To develop and perform transformation from three-phase (abc) signal to $\alpha\beta 0$ stationary reference frame or the inverse
- To get acquainted with Clark transformation procedure
- To get familiarize with the Simulink platform and Simulink library

11.3 Apparatus

- Simulink

11.4 Simulink Block Diagram & Waveform

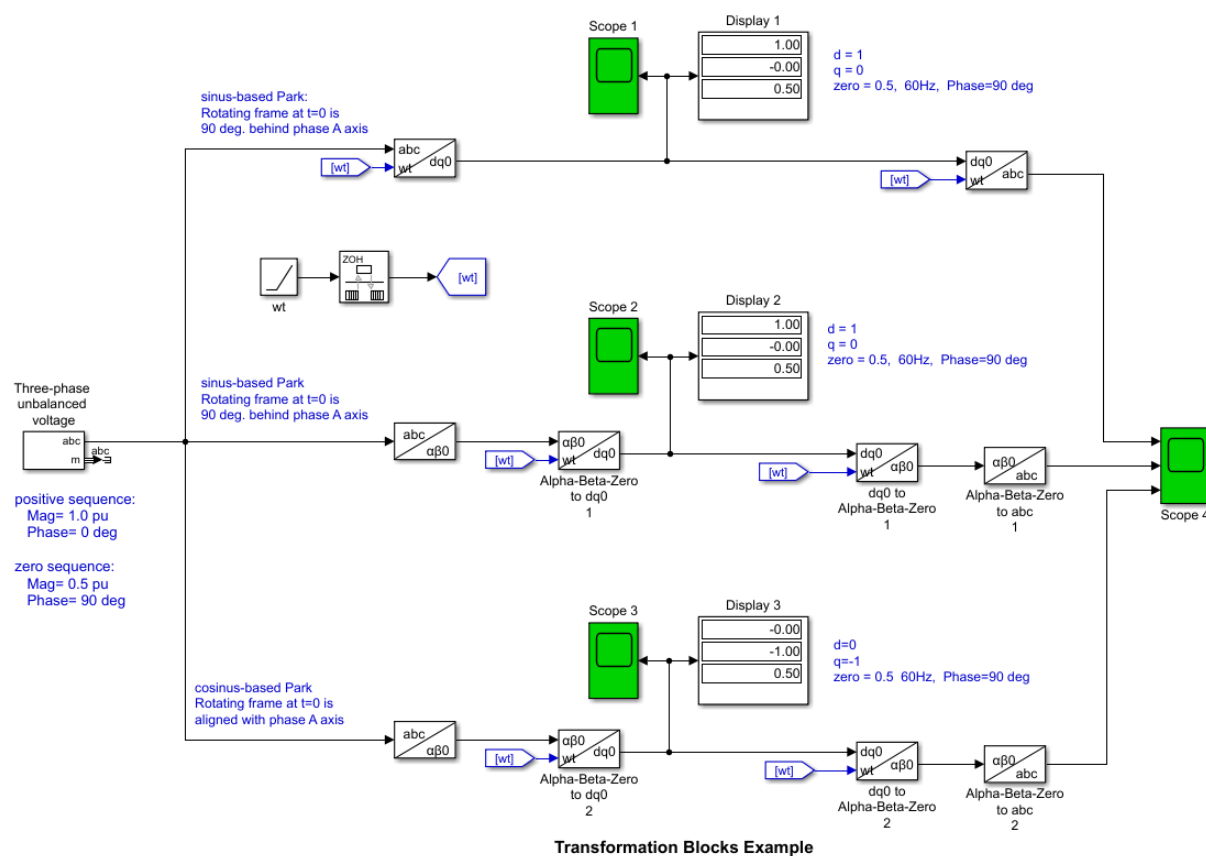
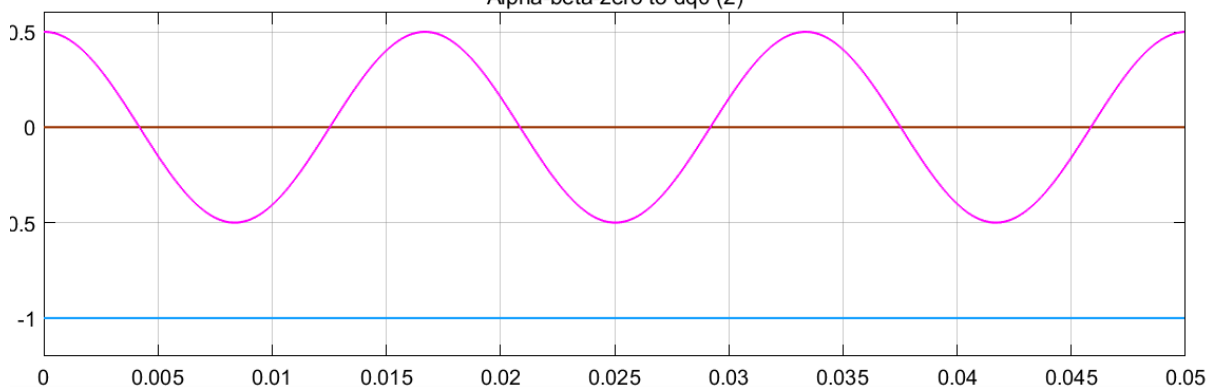


Fig.11.1: Block diagram of three-phase (abc) to two-phase ($\alpha\beta 0$) transformation
Alpha-beta-zero to dq0 (2)



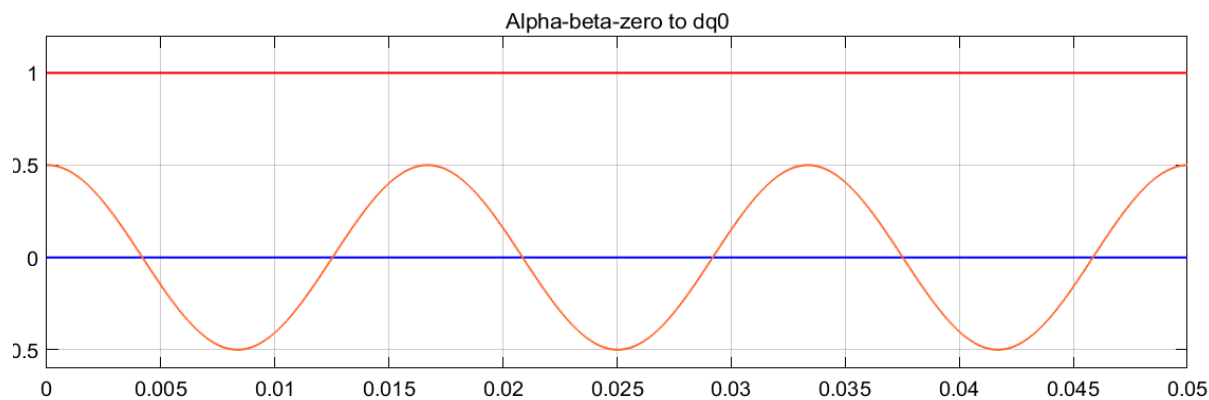


Fig.11.2: Waveform of alpha-beta-zero to dq0

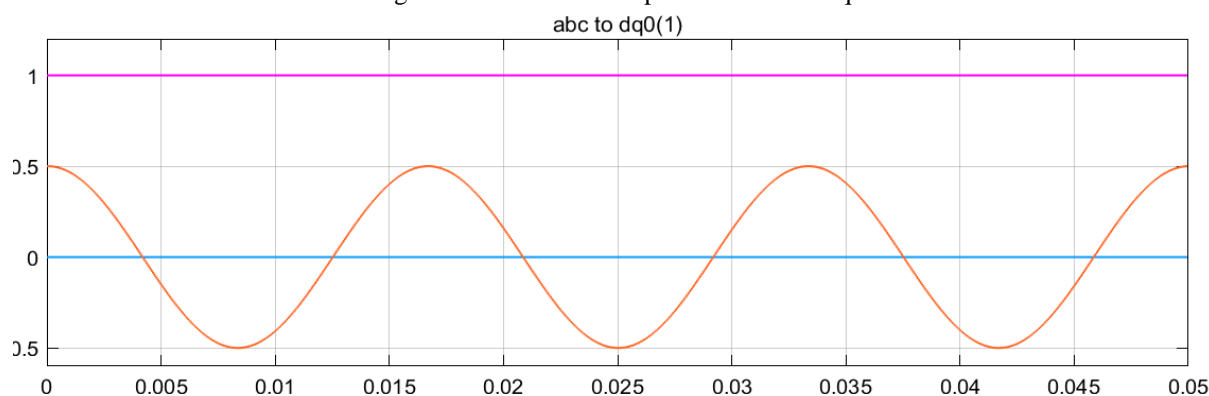


Fig.11.3: Waveform of abc to dq0

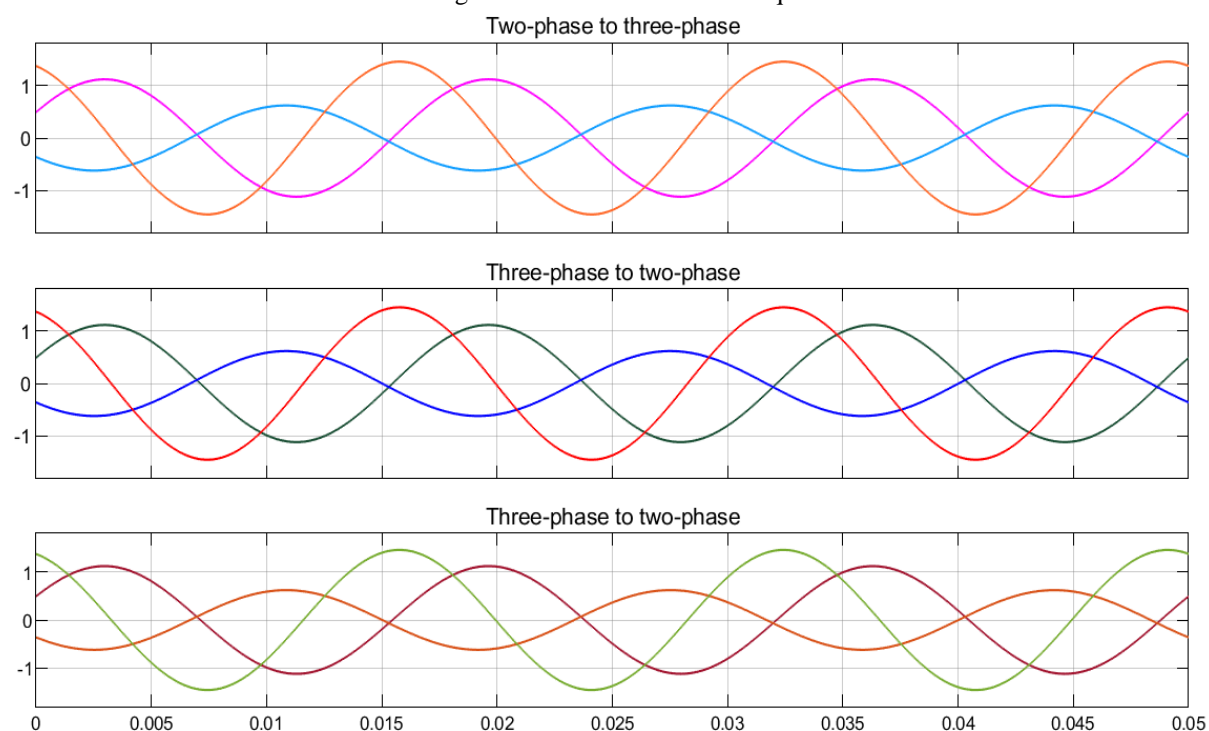


Fig.11.4: Output waveform of three-phase to two-phase transformation and vice versa

11.5 Discussion & Conclusion

This experiment thoroughly investigated to analyze on three-phase (abc) to two-phase ($\alpha\beta 0$) transformation system. Here, we used to analyze though Clark transformation procedure to determine theoretical result and compare with the simulated output. This ensured if the experiment carried was accurate or close enough. Thus, desired output was observed and the simulation was a success.