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3.4 Estimation and Rejection of DC Component3.5 Estimation and Rejection of Harmonics; 3.6 Mitigation of Multiple Harmonics Using SingleBand-Stop Filter; 3.7 Estimation and Rejection of Interharmonics; 3.8 EPLL with Generalized Filtering; 3.9 Soft Start and Problem of Phase Jumps; 3.10 Summary and Conclusion; Problems; 4 Digital Implementation of EPLL; 4.1 First-Order Digitization; 4.2 LTI-EPLL Resonant Controller; 4.3 Robustness in Low Sampling Frequency Applications; 4.4 Robustness in Fixed-Point, High Sampling FrequencyApplications; 4.5 Summary and Conclusion; Problems
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8.2 Derivation of Three-Phase EPLL-II

Sommario/riassunto

"Many excellent books covering phase-locked loops (PLLs) have been published; however, there is practically no book that covers the specifics of PLLs as employed in power systems. The usefulness for such a book fills an immediate need. Existing books cover the type of PLLs used in electronics, communications and instrumentation. Over the past decade or so, many new PLL structures have been developed to address the new requirements in modern power systems. The enhanced phase-locked loop (EPLL) is arguably the most widely accepted structure developed to address power system requirements. It is now a mature concept and has been developed in multiple forms and to address many applications. Due to the structural differences as well as the differences in applications requirements that exist between the "PLL" and the "EPLL", existing books do not offer sufficient material to understand and employ the EPLL. The aim of the proposed book is to fill this gap and to provide a book that clearly, and in simple language, explains the EPLL and reviews its multiple forms and variety of its applications"--
"Offers comprehensive coverage of several phased-locked loop (PLL) architectures and numerous applications of those in power engineering"--