

SYSTEMATIZED PROCEDURE FOR PARAMETER CHARACTERIZATION OF A VARIABLE-SPEED DRIVE USED IN PHOTOVOLTAIC PUMPING APPLICATIONS

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This work presents a systematized procedure for the parameter characterization of a variable-speed drive (VSD) for use in applications to photovoltaic pumping systems (PVPS). The study focuses on the process of the PID controller's tuning of the VSD, in order to optimize the configuration. In this work, three methods of tuning are analyzed and the results show that the methods based on the system's response in open-loop are the most suitable, as well as the use of only the integral proportional control actions (PI). Copyright © 2005 John Wiley & Sons, LTd.

KEY WORDS: PV pumping; PV water pumping; variable-speed drive

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