

## عنوان مقاله:

Power Quality Improvement Using Dynamic Voltage Restorer by Various Control Methods

## محل انتشار:

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## خلاصه مقاله:

The power quality (PQ) requirement is one of the most important issues for power system. Day by day sensitive loads are increasing in distributed system and these sensitive loads are affected with disturbances in the system which is known as power quality issue. The main problems of the power quality like voltage sags/swells in low voltage distribution systems and on the transmission side due to sensitive loads. One of the most important custom power devices that have been created to improve the performance of power quality is Dynamic Voltage Restorer (DVR). The DVR is series-connected power electronics based device. It provides advanced and economic solution to compensate voltage sag and swell. This device can be implemented to protect a group of medium or low voltage consumers. In this paper, the new configuration of DVR based on the integral-proportional (PI) controller and the qd0 algorithm has been proposed for compensating voltage disturbances (sag, swell and etc.). In order to improve the performance of the PI controller and optimal adjustment of the coefficients  $k_p$  and  $k_i$  from the fuzzy logic. In the following this paper, the results of implementing the optimal design structure were compared with other control methods such as hysteresis controller. This study presents compensation of sags and swells voltage during symmetrical and asymmetrical faults.

.Simulation results carried out by Matlab/Simulink verify the performance of the proposed method

## کلمات کلیدی:

dynamic voltage restorer (DVR), power quality, hysteresis controller, fuzzy logic controller, voltage sag/swell

## لینک ثابت مقاله در پایگاه سیویلیکا:

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