

DESIGN OF DYNAMIC VOLTAGE RESTORER (DVR)

ABSTRACT:

The demand for electricity is ever increasing .It is very important to supply quality electric power continuously for industries, business, and residential usage. Discontinued supply to business and industrial areas will results in loss of productivity. It is the task of the power supplier to maintain the supply even when disturbances occur. Insufficient power quality is caused by failure and switching operation in the network, which mainly results in voltage dips, interruptions, and transients and network disturbances from load that mainly results in flicker (fast voltage variations), harmonics, and phase imbalance.

Momentary voltage sags, swell, and interruptions are the most common disturbances that adversely impact electric customer process operations in large distribution systems .When power quality problems are arising from nonlinear customer loads, such as arc furnaces, welding operations, voltage flicker and harmonic problems can affect the entire distribution fields. Several devices have been designed to minimize or reduce the impact of these variations. The solution to the above power quality problem is to use Flexible AC Transmission systems and custom power devices[1] like DSTATCOM (Distribution Static Synchronous Compensator), DVR (Dynamic Voltage Restorer) etc.,

This project focuses on the use od DVR i.e Dynamic Voltage Restorer when a fault is occurring in the power system.The simulation work for a fault power system is done with and without DVR, which shows better outputs (reducing the disturbances)when DVR is employed in the system.