

## A NOVEL CONTROL STRATEGY FOR MITIGATION OF VOLTAGE SAGS/SWELLS USING DYNAMIC VOLTAGE RESTORER (DVR)

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### ABSTRACT

*Power quality plays an critical role in the recent day's with increase in penetration of renewables into the power grid Voltage sags/swells are the most important issues associated with the power grid. Extensive research work has been done to mitigate voltage sags/swells. Dynamic voltage restorer is the one of such equipment to mitigate voltage sags/swells. It is a series connected device, the main purpose of it is to protect sensitive loads from the sags/swells. The control strategies discussed so far are complex vector control techniques are employed in inverter for generation and injection of compensating voltages. The control strategy discussed in this paper has a DC/AC inverter, a bidirectional buck-boost converter and a storage device. In this paper discuss the control strategy where the dc link voltage of bidirectional buck boost converter is dynamically varied according to the sages/swells. Simulations have been carried out using Matlab/Simulink.*

**KEYWORDS:** *Dynamic Voltage Restorer (DVR), Power Quality, Voltage Sages/Swell Mitigation*

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