**LIST OF ABBREVATIONS**

AR Allowed range.

CR Control range.

OR Operative range.

DG Distributed generation power plant.

DN Distribution network.

Down and upper threshold values for each DG.

DG active power variations at the PCC.

DG reactive power variations at the PCC.

DG converter output current.

DN feeder current.

Total number of DN branches.

Total number of DGs.

PCC Point of common coupling.

DG active power.

DG maximum available active power.

PF Power factor.

PQR Power quality and reliability standards.

PV Photovoltaic system.

DG reactive power.

Constraint due to the converter current.

Total amount of reactive at the ith DG PCC.

Constraint due to the converter voltage.

DG maximum reactive power capability.

RES Renewable energy sources.

Voltage versus active power sensitivity coefficient.

Voltage versus reactive power sensitivity coefficient.

DG converter output voltage before

Maximum DG converter output voltage before .

DG output voltage at the PCC.

Maximum allowed DG output voltage.

Minimum allowed DG output voltage.

EKF Extended Kalman Filter

GPV Grid-Connected Photovoltaic

HCC Hysteresis Current Controller

MNP Modified Nominal Power

MPC Modal Predictive Controller

MPPT Maximum Power Point Tracker

MRAC Modal Reference Adaptive Control

PLL Phase locked loop

PCC Point of Common Coupling.

VSI Voltage Source Inverter

ZCC Zero crossing Detector

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