



Title

REACTIVE ENERGY COMPENSATION METHOD AS SECONDARY ELECTRONIC FUNCTION AT THE POINT OF COMMON COUPLING



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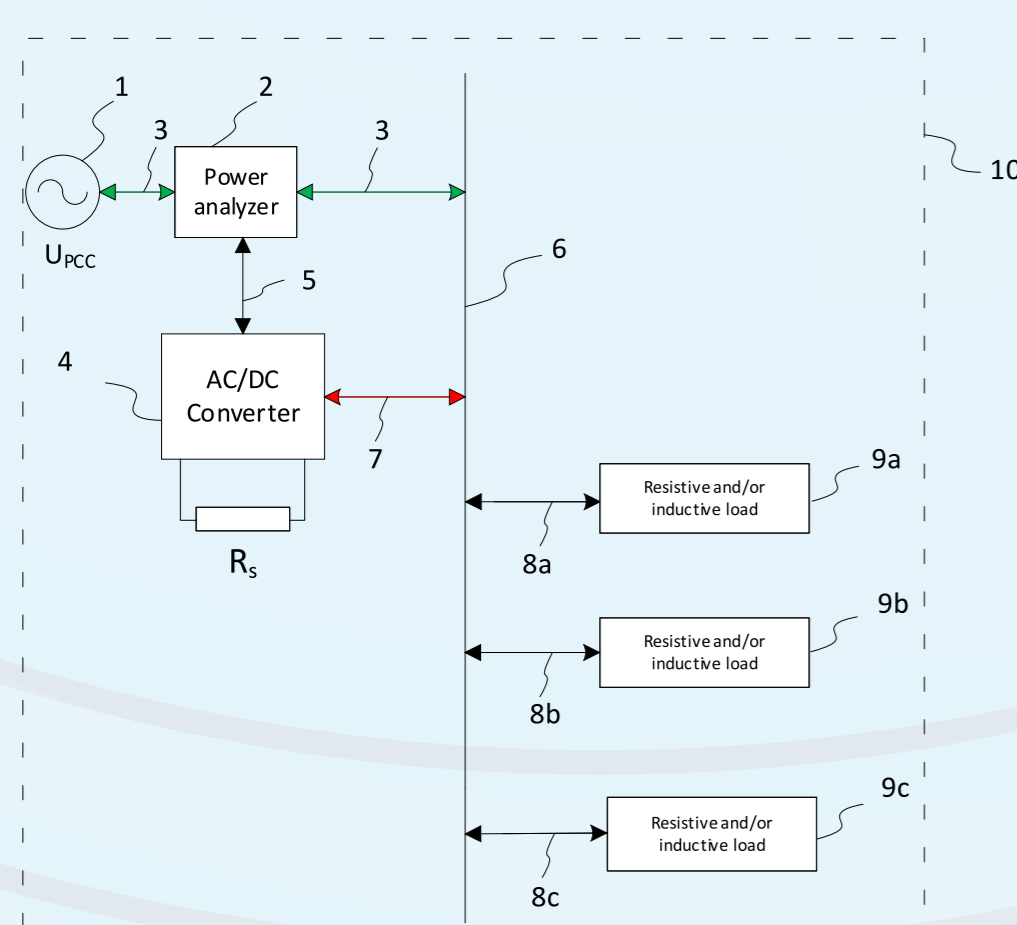
Short presentation
The invention is related to an alternating current supply grid, which serves electric consumers that may be with reactive behavior. The main objective of the invention concerns the algorithm and method of managing the reactive energy in the mentioned grid type and their use for the control of an electronic converter that can compensate reactive energy. More, the purpose of the invention is to increase the exploitation level of the total installed power of electronic AC-DC converters that mainly supply their own consumers, and to serve some secondary electronic functionalities for reactive energy compensation at the point of common coupling to the public grid, by observing and maximizing their load level.



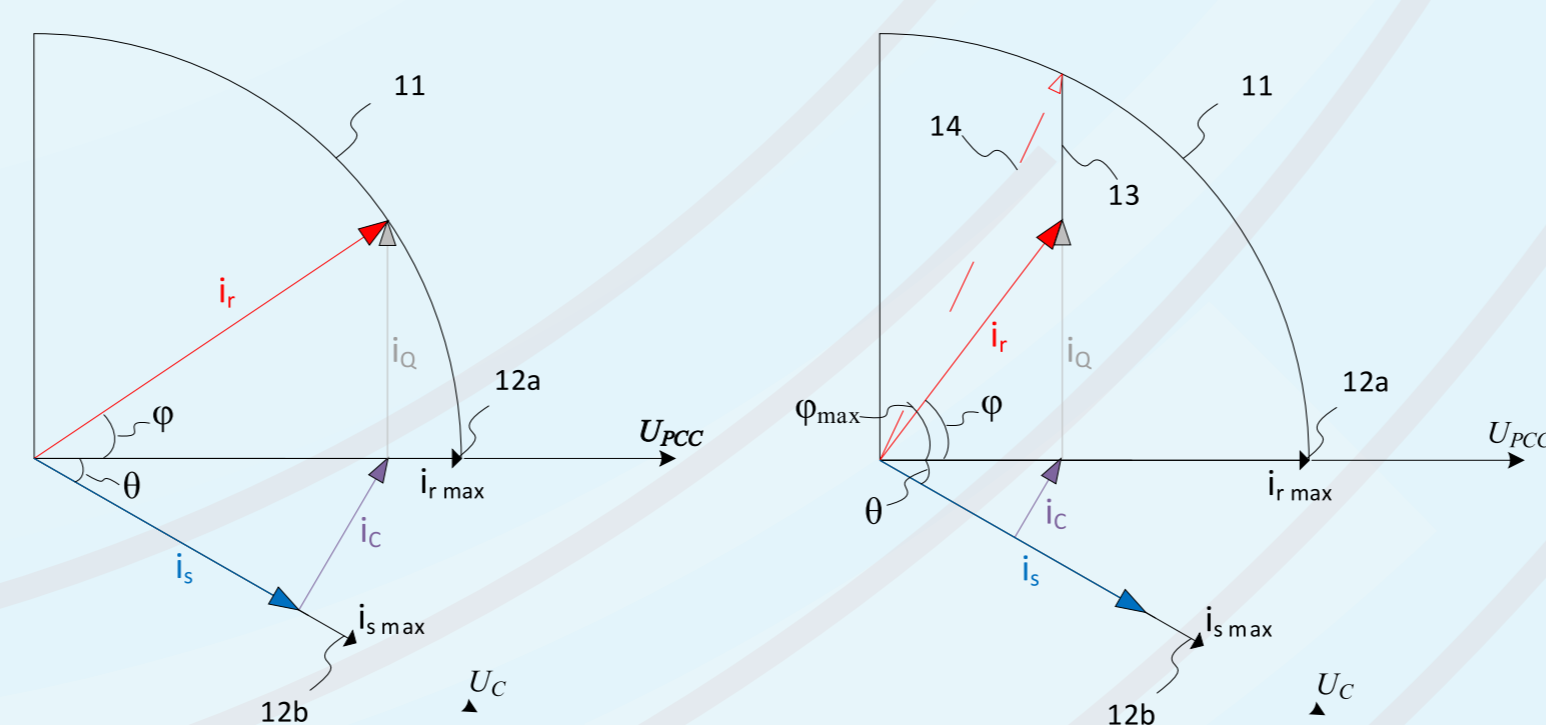
Applicability
Low power factor AC Grids where electronic power rectifiers are used to power different loads. The main purpose of the rectifier will be to supply, at a set voltage, a DC load, but at the same time, to participate in the management of the reactive energy in the supply grid. The control algorithm is based on the constraints established by the power level of the converter and the geometric relations resulting from the phasor diagrams correlated with its electrical quantities.



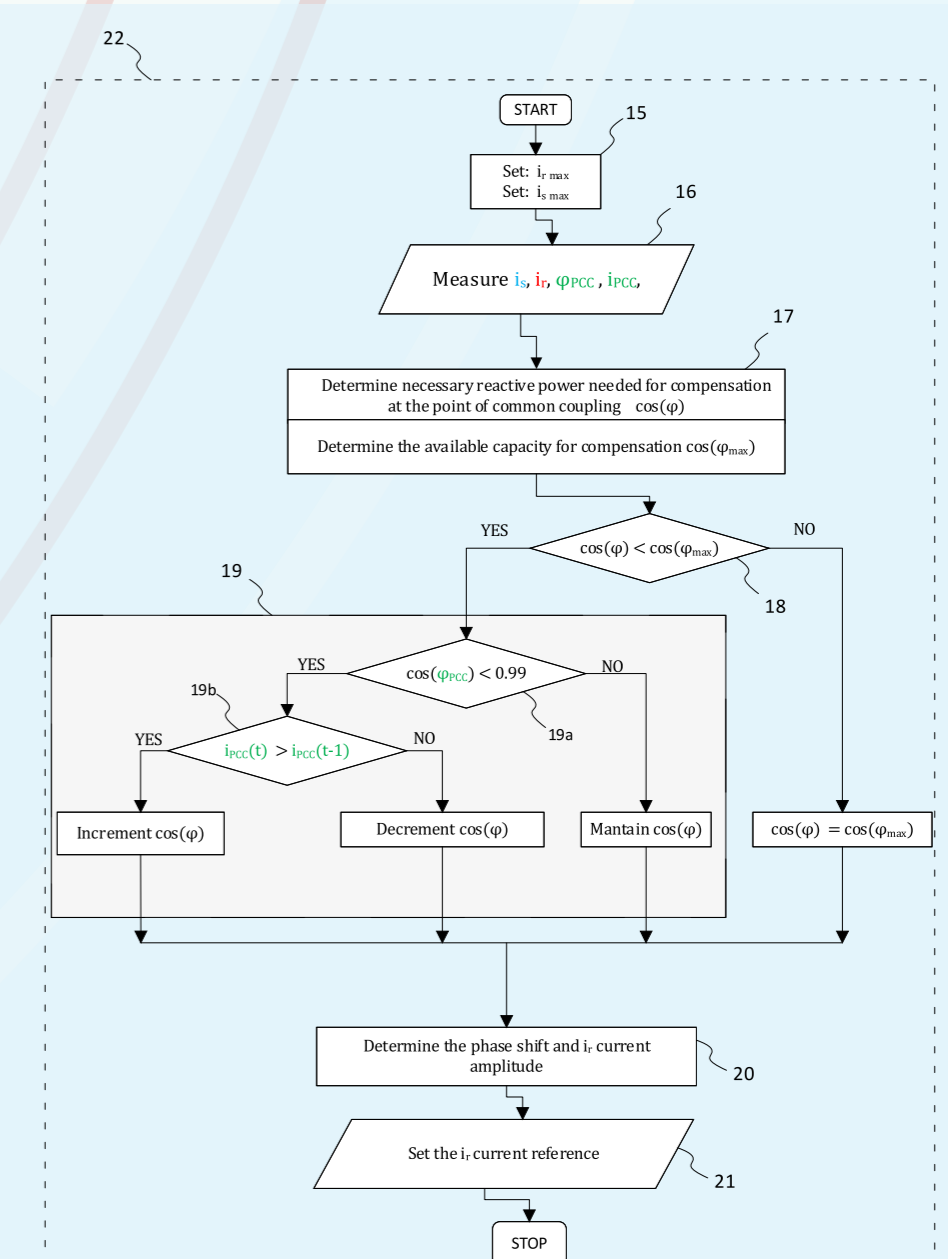
Images



AC Grid structure



Phasor diagram of the method



Control algorithm of the invention