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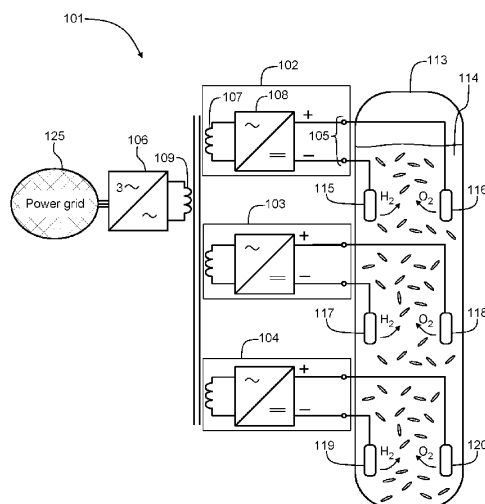


Figure 1

(57) Abstract: of the disclosure: A power converter for a bioelectrochemical system comprises first converters (102-104) each comprising a direct current terminal (105) for supplying electric current via electrodes of the bioelectrochemical system, and a second converter (106) for supplying energy to the first converters from an external electric power grid. Each first converter comprises an electric element (107) for receiving energy from the second converter and a circuitry (108) for converting voltage of the electric element into electrolysis voltage suitable for the bioelectrochemical system. The electric element can be a secondary winding of a transformer or a direct voltage energy storage. Each first converter is galvanically isolated from the other first converters at least when the first mentioned first converter supplies energy to the bioelectrochemical system. Thus, each first converter drives its own electrode pair without disturbing the other first converters.

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