

ABSTRACT

RECONFIGURABLE CAPACITIVE ENERGY STORAGE DEVICE, POWER SUPPLY SYSTEM AND ELECTRIC VEHICLE INCORPORATING SAID DEVICE

The invention is situated within the field of electrical energy storage by capacitive effect, in particular in order to supply autonomous electric or hybrid vehicles. It relates to a reconfigurable electrical energy storage device, i.e. one in which the internal connections between the different energy storage modules can be modified.

The device (100) according to the invention comprises:

- $M \times N$ storage modules (111-122), where M and N are strictly positive natural numbers, each storage module being capable of storing electrical energy by capacitive effect between a negative terminal and a positive terminal,
- contactors (131-140) arranged in order to make it possible to connect by their terminals $M_i \times N_i$ storage modules, in different combinations, each combination denoted by an index i comprising M_i branches (151-153) connected in parallel, each branch comprising N_i storage modules connected in series, where $M_i \times N_i \leq M \times N$, and
- positive (102) and negative (101) electrical connection terminals to which are capable of being connected, in each combination, the ends of the branches connected in parallel.

Figure for publication: Figure 1A