Abstract

Apparatus for buffering the DC voltage at the output of a power supply

The buffer apparatus contains at least one buffer battery (BATT), in particular a rechargeable battery which can be charged via the power supply (SV), and a control unit (CU). The latter connects the buffer battery when the actual value of the DC voltage (Ua) is less than a predetermined minimum value (Uamin), generates a predetermined buffer time period (tm) and disconnects the buffer battery again, cyclically, after this time period has elapsed. The apparatus according to the invention has the advantage that the return of the output DC voltage of the power supply can be identified effectively without major complexity. The loads continue to be supplied both in the event of a failure of the supplying input voltage and in the event of a failure of the power supply, since the output DC voltage, which is essential for the loads, of the power supply is monitored. The apparatus can be connected additively downstream of a power supply, without any intervention in its design being necessary. The apparatus has the further advantage that it automatically connects the battery as a back-up, even in the event of drops in the output DC voltage caused by short-circuits, as soon as the load voltage falls below the minimum value. The invention thus enables a virtually continuous transfer and back-up of the output DC voltage in a multiplicity of fault situations.

FIG 1