

ABSTRACT

Disclosed by the present disclosure are a photovoltaic grid-connected control device, system, method and controller, and relates to the technical field of power electronics. The device includes a controller, and a voltage converter, an inverter and a low-pass filter that are cascaded in sequence, wherein an input terminal of the voltage converter is configured to be connected to a photovoltaic device; an output terminal of the low-pass filter is configured to be connected to a grid, wherein a filter capacitor of the low-pass filter is configured to be connected in parallel with a noncritical load; the controller is configured to control a switch driving signal of the inverter to adjust power of the noncritical load, so that a grid-connected active power output from the low-pass filter can track a grid-connected active power reference value.

FIG. 1