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ZHANG et al.(10) **Pub. No.: US 2022/0368126 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **PHOTOVOLTAIC POWER GENERATION
SYSTEM, PHOTOVOLTAIC INVERTER, AND
DIRECT CURRENT COMBINER BOX**(52) **U.S. Cl.**CPC *H02H 7/268* (2013.01); *H02J 3/381*
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Co., Ltd.**, Futian District (CN)(21) Appl. No.: **17/875,823**(22) Filed: **Jul. 28, 2022****Related U.S. Application Data**(63) Continuation of application No. PCT/CN2020/
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(57)

ABSTRACT

A photovoltaic power generation system includes a protection switch and a plurality of DC-DC converters. Each DC-DC converter includes a direct current bus, a DC-DC circuit, and at least one input interface. The input interface is configured to connect to a photovoltaic unit. The photovoltaic unit includes at least one photovoltaic module. The input interface is connected to the direct current bus by using the protection switch, the direct current bus is connected to an input end of the DC-DC circuit, and an output end of the DC-DC circuit is an output end of the DC-DC converter. The protection switch includes a release device and a switching device that are connected in series. The release device is configured to: when a short-circuit fault occurs on a line in which the release device is located, control the switching device to be disconnected.

