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YOON et al.(10) **Pub. No.: US 2024/0213918 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **SWITCHING ELEMENT OPERATION
DETECTION DEVICE AND PHOTOVOLTAIC
POWER CONVERSION DEVICE***H02J 13/00* (2006.01)*H02S 50/10* (2006.01)(52) **U.S. Cl.**CPC *H02S 40/32* (2014.12); *G01R 31/3277*
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50/10 (2014.12)(71) Applicant: **LG INNOTEK CO., LTD.**, Seoul (KR)(72) Inventors: **Dong Keun YOON**, Seoul (KR); **Ju
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JEONG**, Seoul (KR)(21) Appl. No.: **18/288,619**(22) PCT Filed: **Apr. 28, 2022**(86) PCT No.: **PCT/KR2022/006095**

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A switching element operation detection device according to an embodiment of the present invention comprises: a first sensing unit for sensing current flowing through a driving circuit for driving a first switching element; a second sensing unit for sensing current flowing through a driving circuit for driving a second switching element; a first amplification unit for amplifying current sensed by the first sensing unit; a second amplification unit for amplifying current sensed by the second sensing unit; a first hysteresis unit for outputting a high signal or a low signal according to an output of the first amplifier; a second hysteresis unit for outputting a high signal or a low signal according to an output of the second amplifier; and a switching element operation detection signal output unit for outputting a switching element operation detection signal when both an output of the first hysteresis unit and an output of the second hysteresis unit are high signals.

