

Title (en)
SEMICONDUCTOR SWITCH ASSEMBLY HAVING A MONITORING FUNCTION, ENERGY SYSTEM, AND VEHICLE

Title (de)
HALBLEITERSCHALTERANORDNUNG MIT ÜBERWACHUNGSFUNKTION, ENERGIESYSTEM UND FAHRZEUG

Title (fr)
ENSEMBLE COMMUTATEUR À SEMI-CONDUCTEUR AYANT UNE FONCTION DE SURVEILLANCE, SYSTÈME D'ÉNERGIE ET VÉHICULE

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Application
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Abstract (en)
[origin: WO2022238094A1] The invention relates to a semiconductor switch assembly, an energy system, and a vehicle. The semiconductor switch assembly includes a first semiconductor switch (S11), a second semiconductor switch (S12), a resistor (10), an input terminal (20), an output terminal (22), a reference potential terminal (24), and an analysis unit (30), the first semiconductor switch (S11) and the second semiconductor switch (S12) being connected in series between the input terminal (20) and the output terminal (22) and being designed to allow and prevent a current to flow between the input terminal (20) and the output terminal (22) on the basis of a triggering operation by the analysis unit (30). The resistor (10) is connected between the reference potential terminal (24) and a connection point (50) between the first semiconductor switch (S11) and the second semiconductor switch (S12). The analysis unit (30) is configured to determine, in the switched-off state of both semiconductor switches, a short circuit in the first semiconductor switch (S11) when an input voltage (UE) between the input terminal (20) and the reference potential terminal (24) corresponds to a voltage drop (U10) over the resistor (10), and a short circuit in the second semiconductor switch (S12) when an output voltage (UA) between the output terminal (22) and the reference potential terminal (24) corresponds to a voltage drop (U10) over the resistor (10).

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