

ANMELDUNG | SCHUTZ | VERWERTUNG



Focus Sectors

- Supply Mains
- Photovoltaics
- Fuel Cell Systems
- Battery
- Accumulator

Key Words

- Electrical Power System Protection
- Fuse
- Network
- Autonomous Power System

Development Status

- Prototype available

Patent Procedure Status

- DE Patent filed

Chances for Cooperation

- Licensing
- Patent Sale
- R&D Cooperation

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Innovative Under- and Overvoltage Protection Unit

Innovation and Customer Benefit

This invention comprises an electric power system protection unit with an undervoltage and overcurrent trigger for interconnected or simple power systems with reduced overcurrent capability without the need for an external power supply.

Possible Customer benefits are:

- Innovative primary electrical protection without external energy source for mobile or stationary power systems
- Possibility of defined reclosing (Automation)
- New protection option for DC networks
- Simple relay with one N/O contact without additional auxiliary contacts
- Resistant to vibration and shock

Technical Description

The central element of the circuit is a differential amplifier that controls a relay. If the predefined voltage range is left, the current controlling the relay is switched off and the relay contact opens. The relay, which connects the system with the electrical power system, requires only one contact. To increase the reliability it is possible to connect a second relay in series. The device is simple and robust with a calculated MTBF of 300.000 hours.

Possible Applications

This technology can be used for networks that are supplied by higher ohmic power sources, where the short-circuit currents are always or temporarily low, such as photovoltaic systems, fuel cell systems, batteries or accumulators.

Systems can be protected, in which both undervoltage and overcurrent alone or jointly occur.

