HIGH-VOLTAGE **PYROFUSE**

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High-voltage (HV) systems with voltages up to 1000 VDC have become a key component in battery (BEV), fuel cell (FCEV) and hybrid (PHEV) electric vehicles, by substantially improving the efficiency of modern vehicles through faster charging and enhanced range. In modern architectures with such high voltages and peak currents up to 1.5 kA nominal and up to 25 kA in case of a short-circuit, reliable and safe solutions are necessary for rapid switching of high-voltage circuits under normal operating modes as well as under emergencies.

Apart from automotive, high-voltage circuits are widely used in several other industry sectors, requiring high-end solutions to guarantee system functionality and safety.

The Pierburg Pyrofuse plays a key role to safety in BEV, PHEV and FCEV vehicles by rapidly disconnecting the battery or the DC fast charging plug in case of critical situations (e.g., vehicle crash or short circuits).

BENEFITS

- Automotive design – best-in-class for functionality, costs, and weight
- Low resistance of busbar < 26 µΩ – reduces power losses and thermal self-heating
- Gas-tight – no outburst of conductive and hot gasses
- Lowest weight < 180 g

TECHNICAL DATA

Operating voltage	450 … 1000 VDC
Operating/break currents	< 700 A cont., < 30 kA break
Electrical resistance	< 26 µΩ
Break time	< 1 ms
Operating temperature	up to 250 °C

PIERBURG

Pierburg, as a heritage brand, is a system provider for high-quality and innovative solutions and control technologies for the automotive and energy industries, among others.

With its Business Sections, Pierburg stands for outstanding expertise in the following areas: air management, thermal management, e-mobility and hydrogen technology.

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