



Neumarkt, November 2014

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## **DEHNguard® SE DC – Powerful d.c. switching device DCD ensures safe operation**

The new DEHNguard® SE DC surge protective devices from the Neumarkt-based globally active lightning and surge protection expert DEHN protect d.c. systems against surges according to the relevant system configuration. The d.c. switching device DCD of the modular DEHNguard® SE DC type 2 surge arrester is designed in such a way that the protective device is safely disconnected in case of overload, thus preventing d.c. switching arcs and fire damage. Depending on the voltage level, DEHNguard® SE DC can even be used without additional backup fuse in case of direct currents up to 300 A. It is ideally suited for use in safety lighting systems, emergency power supply systems, d.c. systems for direct supply of d.c. drives, control circuits and any kind of battery-operated supply systems.

The DEHNguard® SE DC product line is particularly designed for d.c. applications. The potential safety risk which occurs if conventional a.c. SPDs are used in d.c. systems can be minimised by means of the new devices, which are particularly developed for direct currents.

The new **d.c. switching device DCD** of DEHNguard® SE DC provides protection in all operating states and prevents fire damage caused by d.c. switching arcs. The discharge capacity and the low voltage protection level are optimally adapted to the application environment. Depending on the voltage level, DEHNguard® SE DC can even be used without additional backup fuse in case of direct currents up to 300 A. The arrester provides a high degree of safety and comfort thanks to its modular design and incorporates the unique vibration-proof module locking system of the latest Red/Line® design.

The mechanical operating state/fault indication of DEHNguard® immediately indicates the operating state of the device. It is combined with the proven thermal disconnecter for varistors which is connected to the additional powerful d.c. switching device DCD.

As is the case with the DEHNguard® product series for a.c. systems, the installation to be protected is not disconnected from supply voltage as soon as the disconnecter trips to ensure reliable supply of the installation. Since there are no specific product standards for d.c. SPDs, these new d.c. arresters were tested based on the requirements for type 2 arresters according to EN 61643-11 and IEC 61643-1/11.

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Thanks to voltage levels of 60 V d.c., 242 V d.c., 550 V d.c. and 900 V d.c., DEHNguard® SE DC is ideally adapted to the different technical fields of application of d.c. systems such as:

**Safety lighting systems, emergency supply systems**

DG SE DC 242 (FM) is developed for protecting safety lighting and emergency supply systems. The device can be used up to a max. d.c. voltage of 242 V and up to a max. a.c. voltage of 253 V (in case of a max. backup fuse of 10 A gG), which are typically used in this application environment. It safely protects the control systems and illuminants from the effects of surges.

**Data centres**

DG SE DC 550 (FM) covers a voltage range used to operate data centres which are nowadays directly supplied with 380 V d.c. It ensures that sensitive systems are protected in case of surges and effectively ensure the reliable supply and availability of a data centre.

**Charging stations for electric vehicles**

Fast charging stations for electric vehicles are directly operated with d.c. voltages from 400 V d.c. to max. 850 V d.c. to provide energy for the short charging cycles. DG SE DC 900 (FM) is designed in such a way that it can be ideally used for such applications.

**d.c. drives of railway systems**

Typical city and underground railways are nowadays supplied with a traction voltage of 750 V d.c. DG SE DC 900 (FM) is an ideally adapted surge protective device for rectifier units and drives. It allows to safely protect traction power supply systems, which are an integral part of the infrastructure of public transport, against surges caused by indirect lightning effects or switching operations.

**Cell sites (remote radio heads)**

Active antennas (remote radio heads) are nowadays supplied with a nominal voltage of 48 V d.c. DG SE DC 60 (FM) is optimally adapted to this field of application and protects voltage supply systems and antennas against surges.

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Photo: DEHNguard SE - d.c. switching device DCD provides safety for d.c. systems

The market leader DEHN, a globally active family-owned electrotechnical company with about 1,600 employees worldwide, offers innovative products and solutions as well as comprehensive services in the field of **surge protection, lightning protection and safety equipment**. DEHN focuses on the protection of system and building technology, the transportation, telecommunication and process sector, photovoltaic systems, wind turbines, etc. The company's continuous growth is based on more than 100 years of tradition and experience as well as highest quality standards and consistent customer and market orientation throughout the world.

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