SIEMENS

Press

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# World’s narrowest arc fault detection device with integrated line protection

Siemens presents at Light+Building 2018 the world's first arc fault detection device (AFDD) with integrated line protection in one modular width (MW). The intelligent device now detects arcing faults in electrical cables and, at the same time, protects against overload and short circuit. In case of critical values, the switch interrupts the circuit, thus providing preventive protection against fires. Due to its narrow design, the type 5SV6 arc fault detection device allows for a particularly space-saving installation: For new electrical installations, this saves 50 percent space, compared to the installation of two separate devices. In existing buildings, the arc fault detection device can be retrofitted very easily and without an additional space requirement. According to the international standard IEC 60364-4-42, AFDDs are strongly recommended all over Europe as the recognized state-of-the-art technology in specific application fields.

With the 5SV6 arc fault detection device, Siemens has already launched the third generation for preventive fire protection in the IEC market. Unlike line protection and residual current circuit breakers, the device detects not only parallel but also serial arcing faults. Serial arcing faults are one of the most frequent causes of electrical fires. They can arise, for example, due to damaged cable insulation, crushed cabling, bent connectors or loose contacts in the electrical installation. They cause rapid overheating, which can ultimately spark a cable fire, consequently leading to a building fire. Arc fault detection devices thus significantly increase the safety of people and assets.

The arc fault detection devices are part of the integrated Sentron portfolio from Siemens. The product series encompasses the 5SM6 arc fault detection device in two widths for mounting on miniature circuit breakers or residual current breakers

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with overload, as well as the new 5SV6 combined version.

The technical basis of the arc fault detection devices is the SIARC patented detection technology from Siemens: The devices continuously measure the intensity and duration of episodes of high-frequency (HF) noise associated with the voltage and current and the gaps between them. An integrated microcontroller analyzes these signals and triggers the disconnection of the connected circuit within fractions of a second if anything unusual is detected. The arc fault detection devices are able to distinguish harmless causes of faults, such as can arise when operating power drills or vacuum cleaners, from hazardous arcs.

This press release and further material is available at
www.siemens.com/press/PR2018030191EMEN
For further information on Division Energy Management, please see
www.siemens.com/energy-management
For further information on arc fault detection devices (AFDD), please see
www.siemens.com/afdd
More information about the Light+Building can be found at:
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