New Siemens RCDs detect residual currents with mixed frequencies

At this year's Light+Building, Siemens Infrastructure & Cities will be unveiling Type F RCDs. This type of device protects from electric shocks in the case of residual currents that can result with single-phase electrical loads such as washing machines and pumps, for example. These can generate residual currents with mixed frequencies, which means that they need special protective devices. Compared to conventional RCDs, the ones of Type F also provide increased unwanted tripping resistance and surge current withstand capability. They can be used in private households, offices and public buildings.

If a specific residual current is exceeded due to a defective electrical device, RCDs disconnect the monitored circuit quickly and safely from the mains supply and protect people who may touch live parts of the affected device. Apart from this, the protection devices help to prevent fires due to ground-fault currents. For many areas of application, it is already compulsory to install RCDs in new buildings.

Siemens' new Type F RCDs offer the same range of protection and functionality as a Type A RCD; this means that they detect sinusoidal AC currents as well as pulsating DC currents. In addition to this, they are capable of detecting residual currents from mixed frequencies of up to one kilohertz (kHz), which can often occur on the outgoing feeder side of single-phase frequency converters. The release behavior has a short-time delayed. This prevents undesirable interruptions to the electrical supply if, for example, pulsed leakage currents of up to ten milliseconds occur at activation of filter capacitors.

The RCDs have a surge current withstand capability of more than three kiloamperes (kA) and can accept superimposed smooth DC residual currents of up to ten milliamperes (mA) without affecting the function of the devices. Above all they offer high levels of safety and a long service life. Type F
RCDs will be introduced as following variants: Residual current operated circuit breaker (RCCB), RC unit and combined RCBO.

For additional information about Siemens' appearance at Light+Building 2012, visit:  

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Caption:
Siemens Typ F RCDs protect from electric shocks in the case of residual currents that can result with single-phase electrical loads. The devices will be introduced as following variants: Residual current operated circuit breaker (RCCB), RC unit and combined RCBO.