Power factor correction
Controllers for up to 32 thyristor modules via RS485

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TDK Corporation has extended its BR7000 series of EPCOS power factor controllers with two new types. The BR7000-I-TH controller offers 12 relay outputs for capacitor contactors and 12 transistor outputs for thyristor modules. The BR7000-I-TH/S485 features an additional RS485 bus interface that allows up to another 32 EPCOS TSM-LC-S thyristor modules to be controlled. This bus interface also enables bidirectional communication with the thyristor modules.

The new controllers are particularly well matched to the thyristor modules of the new TSM-LC-S series for dynamic power factor correction with a rating of up to 55 kvar. They detect and store key grid and capacitor parameters. This enables the implementation of complex PFC installations, which are also self-monitoring. This improves system protection and helps to increase the operating life of the capacitors.

Both controllers already offer 20 pre-installed control series. In addition to the most important grid parameters such as voltage, current, frequency as well as reactive, apparent and effective power, they also measure the distortion of current and voltage (THD-I/THD-V). The graphics display the results up to the 33rd harmonic. These controllers are designed for voltages of between 30 V AC and 440 V AC (L-N), or of 50 V AC to 760 V AC (L-L).

Glossary

- Reactive power: Occurs when the phase angle between the current and voltage is shifted. Reactive power is caused by inductive loads such as electric motors and transformers and cannot be used, but must still be produced by power plants.
- Power factor correction: Reactive power can be almost completely compensated by connecting in PFC capacitors. That reduces energy costs and relieves the environment.

Main applications

- Power factor correction in one and three-phase industrial networks

Main features and benefits

- Controlling up to 32 EPCOS TSM-LC-S thyristor modules via an RS485 interface
- Bidirectional communication with the thyristor modules
- Display of a wide range of parameters including the harmonics

About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's portfolio includes electronic components, modules and systems* marketed under the product brands TDK and EPCOS, power supplies, magnetic application products as well as energy devices, flash memory application devices, and others. TDK focuses on demanding markets in the areas of information and communication technology and consumer, automotive and industrial electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2014, TDK posted total sales of USD 9.6 billion and employed about 83,000 people worldwide.

* The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites, inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors.

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