

# Film Capacitors – Power Factor Correction

## Power Factor Controller

<b>Series/Type:</b>	<b>BR6000 V6.0</b>
<b>Ordering code:</b>	<b>B44066R6...E230</b>
<b>Date:</b>	June 2016
<b>Version:</b>	3

© EPCOS AG 2016. Reproduction, publication and dissemination of this publication, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

EPCOS AG is a TDK Group Company.

### Preliminary data

#### Characteristics

- Intelligent control
- Menu driven handling (plain language; Czech/Dutch/German/English/French/Polish/Portuguese/Russian/Spanish/Turkish)
- Self-optimizing control capability
- Automatic initialization
- Test-run possible
- Large voltage measuring range
- Recall function of recorded values
- Four-quadrant operation (e.g. stand by generator)
- Powerful alarm output
- 13 steps possible
- Control series editor
- Detailed expert modes



#### Features

Display	<ul style="list-style-type: none"> <li>- Large and multifunctional LCD (2 × 16 characters)</li> <li>- Graphic and alphanumeric</li> <li>- LCD illumination</li> <li>- OLED display available for series BR6000-HD</li> </ul>
Housing	<ul style="list-style-type: none"> <li>- Zinc coated sheet steel</li> </ul>
System parameters displayed	<ul style="list-style-type: none"> <li>- System voltage (V AC)</li> <li>- Reactive power (kvar)</li> <li>- Active power (kW)</li> <li>- Frequency</li> <li>- Apparent power (kVA)</li> <li>- Apparent current (A)</li> <li>- Temperature (°C)</li> <li>- Real-time cos δ</li> <li>- Target cos δ</li> <li>- kvar value to target cos δ</li> <li>- Harmonics (3rd ... 19th) V (%), I (%)</li> <li>- Energy (kvar)</li> </ul>
Alarm output	<ul style="list-style-type: none"> <li>- Insufficient compensation</li> <li>- Overcompensation</li> <li>- Undercurrent</li> <li>- Overcurrent</li> <li>- Overtemperature</li> <li>- Harmonics</li> <li>- Threshold value programmable</li> <li>- Internal error storage</li> </ul>

**Preliminary data**

Recall recorded values	<ul style="list-style-type: none"> <li>- Maximum voltage (<math>V_{\max}</math>)</li> <li>- Minimum voltage</li> <li>- Maximum reactive power, Q (kvar)</li> <li>- Maximum active power, P (kW)</li> <li>- Maximum apparent power, S (kVA)</li> <li>- Maximum temperature (°C)</li> <li>- Maximum THD-V/THD-I</li> <li>- Switching cycles of capacitors</li> <li>- Operation time of capacitors</li> </ul>
------------------------	--

**Technical Data**

Weight	1 kg
Case	Panel-mounted instrument, 144 × 144 × 55 mm (cut out 138 × 138 mm)
Ambient conditions <ul style="list-style-type: none"> <li>- Over-voltage class</li> <li>- Pollution degree</li> <li>- Operating temperature</li> <li>- Storage temperature</li> <li>- Sensitivity to inference (industrial areas)</li> <li>- Spurious radiation (residential areas)</li> <li>- Safety guidelines</li> <li>- Mounting position</li> <li>- Humidity class</li> </ul>	III 2 -20 ... +60 °C -20 ... +75 °C EN 55082-2:1995 EN 55011 10.1997 IEC 61010-1:2001 EN 61010-1:2001 Any 15 ... 95% without dew
Protection class <ul style="list-style-type: none"> <li>- Front plate</li> <li>- Rear side</li> </ul>	IP54 to IEC60529 IP20 to IEC60529
Operation <ul style="list-style-type: none"> <li>- Supply voltage</li> <li>- Target <math>\cos \delta</math></li> <li>- Switching and discharge time range</li> <li>- Number of control series</li> <li>- Control modes</li> </ul>	110...230 V AC $\pm 15\%$ , 50/60 Hz 0.3 ind. ... 0.3 cap. 1 s ... 20 min 20 series preset + control series editor for free programming Series switching (LIFO), circular switching (FIFO), self-optimized intelligent control mode

**Preliminary data**

Measurement	
- Measurement voltage range	30 ... 525 V AC (L–L / L–N)
- Fundamental frequency	50 and 60 Hz
- Measurement current (CT)	x/5 and x/1 Ampere possible
- Minimum operating current	40 mA / 10 mA
- Maximum current	5.3 A (sinusoidal)
- Zero voltage release	< 15 ms
- Accuracy	Current, voltage: 1% Reactive, active, apparent power: 2%
Switching outputs	
Relay outputs	
- Number of outputs	6/7 or 12/13 steps available
- Switching voltage/current	Max. 250 V, 6 A
Alarm relay	Potential-free contact (max. 250 V, 6 A)

**Ordering Codes**

Type	Voltage 50/60 Hz	Output		Alarm output	Ordering code
		Relay	Transistor		
BR6000-R6	110 ... 230	6	–	Yes	B44066R6006E230
BR6000-HD6	110 ... 230	6	–	Yes	B44066R6506E230
BR6000-R12	110 ... 230	12	–	Yes	B44066R6012E230
BR6000-HD12	110 ... 230	12	–	Yes	B44066R6512E230

**Display of ordering codes for EPCOS products**

The ordering code for one and the same EPCOS product can be represented differently in data sheets, data books, other publications, on the EPCOS website, or in order-related documents such as shipping notes, order confirmations and product labels. **The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products.** Detailed information can be found on the Internet under [www.epcos.com/orderingcodes](http://www.epcos.com/orderingcodes)



## Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule we are either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether a product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet ([www.tdk-electronics.tdk.com/material](http://www.tdk-electronics.tdk.com/material)). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6. Unless otherwise agreed in individual contracts, **all orders are subject to our General Terms and Conditions of Supply**.
7. **Our manufacturing sites serving the automotive business apply the IATF 16949 standard**. The IATF certifications confirm our compliance with requirements regarding the quality management system in the automotive industry. Referring to customer requirements and customer specific requirements ("CSR") TDK always has and will continue to have the policy of respecting individual agreements. Even if IATF 16949 may appear to support the acceptance of unilateral requirements, we hereby like to emphasize that **only requirements mutually agreed upon can and will be implemented in our Quality Management System**. For clarification purposes we like to point out that obligations from IATF 16949 shall only become legally binding if individually agreed upon.
8. The trade names EPCOS, CeraCharge, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CTVS, DeltaCap, DigiSiMic, ExoCore, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PowerHap, PQSine, PQvar, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at [www.tdk-electronics.tdk.com/trademarks](http://www.tdk-electronics.tdk.com/trademarks).

Release 2018-10

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[EPCOS / TDK:](#)

[B44066R6012E230](#)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.