



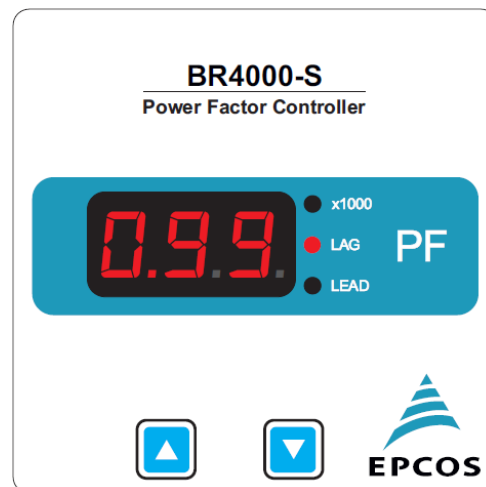
Film Capacitors – Power Factor Correction

Power Factor Controller

Series/Type: B44066R****R***
Ordering code: B44066R41**R***
Date: 2019-06-05
Version: 2

Characteristics

- Intelligent control
- Minimum system setting in auto mode
- Self-optimizing control capability
- Automatic initialization
- CT ratio setting is not required
- Auto detection for number of steps
- Large voltage measuring range
- Recall function of recorded values
- Manual test mode available
- 9 Control series available
- Define direct capacitor step kvar
- Detailed expert modes
- Display of under and over compensation
- 4 / 6 / 8 relay configuration


Features

Display	- 3 digit 7 segment display (digit height 14mm)
System parameters displayed	- Real time cos phi
Protection	- Insufficient compensation (under compensation) - Overcompensation - Undercurrent - Under voltage - Over voltage

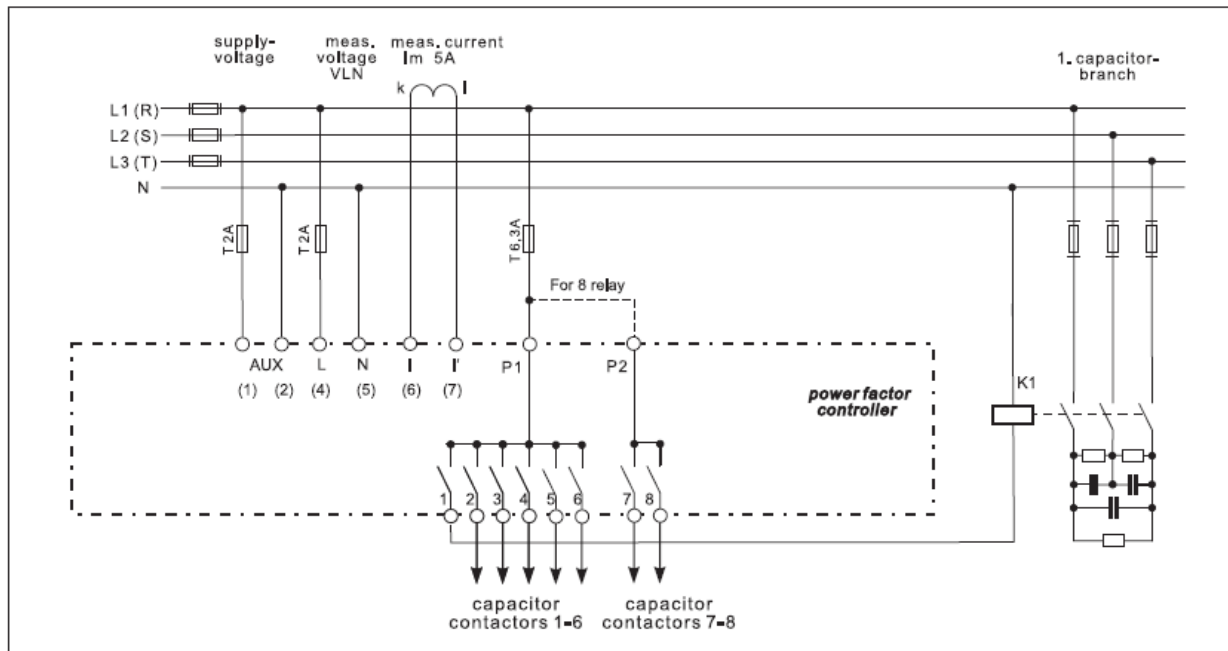
Technical Data

Weight	0.25 kg
Case	Panel-mounted instrument, 96 x 96 x 35 mm (back depth 55mm with add on bank module) (cut out 92 ^{+0.8} x 92 ^{+0.8} mm)
Ambient conditions	<ul style="list-style-type: none"> - over-voltage class III - pollution degree 2 - operating temperature 0 ... +55 °C - storage temperature -20 ... +65 °C - sensitivity to EMC IEC 61326-1 : 2010 - safety guidelines IEC 61010-1 : 2010

<ul style="list-style-type: none"> - mounting position - humidity class Protection class <ul style="list-style-type: none"> - front plate - rear side 	<p>Flush mounting 15% ... 95% non-condensing</p> <p>IP50 to IEC60529 IP20 to IEC60529</p>
Operation <ul style="list-style-type: none"> - auxiliary supply voltage - auxiliary supply frequency - auxiliary VA burden(with 8 relay ON) - target cos phi - switching on and off time - discharge time - number of control series - control modes 	<p>80 300 V 50/60 Hz 50Hz <8VA 0.8 lag. ... 0.8 lead adjustable 10 s fixed 60 s fixed 9 series preset + direct capacitor step kvar programming self-optimized intelligent control mode</p>
Measurement <ul style="list-style-type: none"> - measurement voltage range - fundamental frequency - measurement current (CT) - minimum operating current - maximum current - input current burden - accuracy power factor 	<p>80 ... 300 V AC, 240V nominal(L–N) 50 Hz x/5 and x/1 Ampere possible 10 mA 6 A (sinusoidal) <0.2VA (approx.) Current, voltage: 1% ± 2°</p>
Switching outputs Relay outputs <ul style="list-style-type: none"> - number of outputs <ul style="list-style-type: none"> - switching voltage/current 	<p>4 (without add on module) 6 (without add on module) 8 (with add on module) Max. 250 V/ 1000W</p>

Ordering codes

Type	Voltage 50/60 Hz	Output		Alarm output	Switchover 2 nd parameter set	Inter- face	Ordering code
		Relay	Transistor				
BR4000-S	240	4	–	No	No	No	B44066R4104R240
BR4000-S	240	6	–	No	No	No	B44066R4106R240
BR4000-S	240	8	–	No	No	No	B44066R4108R240

Connection plan

⚠ Cautions and warnings

Controller hunting: When putting the capacitor bank into operation, it is required to avoid needless switching cycles (means permanent switching on and off of steps without significant change of consumer load). This so called “controller hunting” would increase the number of switching operations of the connected contactors and capacitors and decrease the expected life cycle (wear out) and, in worst case, capacitor bursting and fire, etc. This can be avoided by a proper programming of the BR4000S with the actual system parameters (current transformer prim. and sec., first kvar step, control series, switching time).

Accessory for PF-Controller BR4000S

- Add on Relay module should be ordered separately

⚠ Please read cautions information about PFC capacitors and cautions as well as installation and maintenance instructions in the actual version of the Product Profile *Power Factor Correction* to ensure optimum performance and prevent products from failing, and in worst case, bursting and fire, etc.

The actual Product Profile is available at www.tdk-electronics.tdk.com/publications.

Information given in the PFC-product profile and values given in the data sheet reflect typical specifications. You are kindly requested to approve our product specifications or request our approval for your specification before ordering.

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). 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.

Important notes

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.

Release 2018-10