



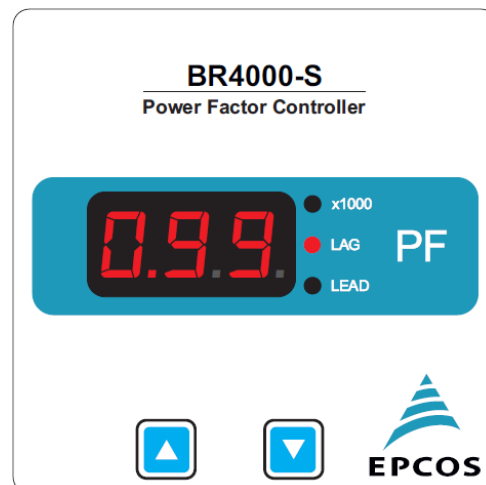
## Film Capacitors – Power Factor Correction

### Power Factor Controller

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

### 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)<br>- Overcompensation<br>- Undercurrent<br>- Under voltage<br>- Over voltage |

### Technical Data

|                                                                                                                                                                                                                                                  |                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                                                                                                                                                                                                           | 0.25 kg                                                                                                                                           |
| Case                                                                                                                                                                                                                                             | Panel-mounted instrument,<br>96 x 96 x 35 mm<br>(back depth 55mm with add on bank module)<br>(cut out 92 <sup>+0.8</sup> x 92 <sup>+0.8</sup> 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 EMC</li> <li>- safety guidelines</li> </ul> | III<br>2<br>0 ... +55 °C<br>-20 ... +65 °C<br>IEC 61326-1 : 2010<br>IEC 61010-1 : 2010                                                            |

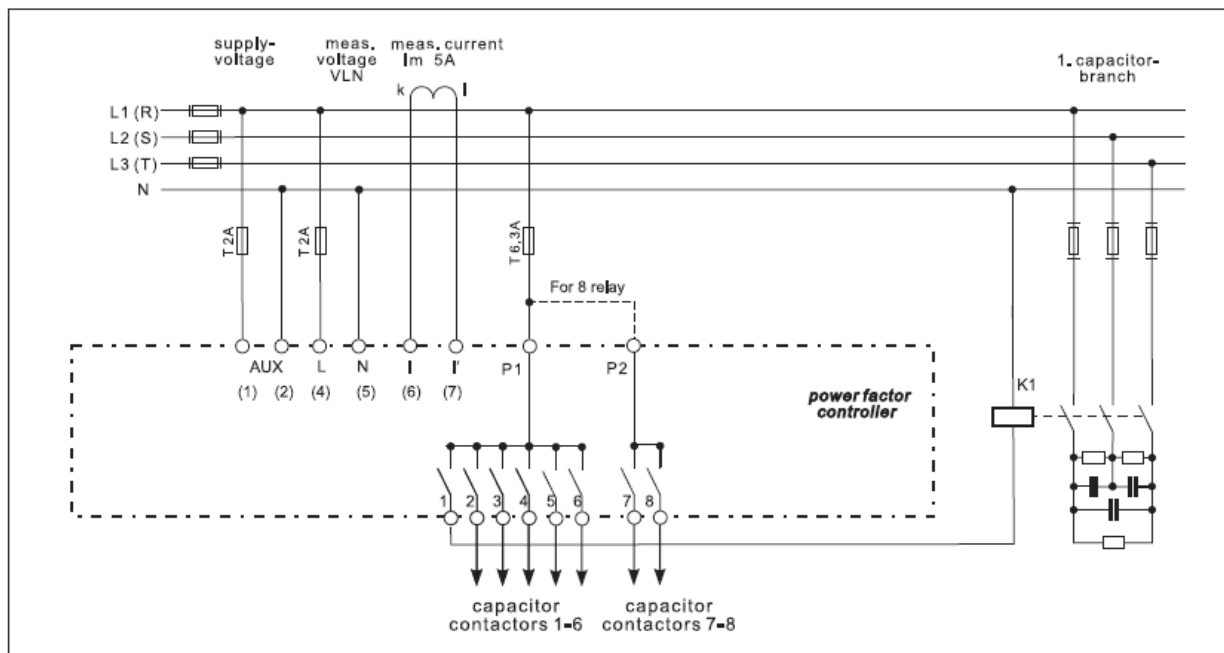
**Film Capacitors – Power Factor Correction**
**B44066R41\*\*R\*\*\***
**Power Factor Controller**
**B44066R\*\*\*\*R\*\*\***

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

**Ordering Codes**

| Type     | Voltage<br>50/60 Hz | Output |            | Alarm<br>output | Switchover<br>2 <sup>nd</sup><br>parameter<br>set | Inter-<br>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](http://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.

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## Important notes

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