



Film Capacitors – Power Factor Correction

Power Factor Controller

Series/Type: BR 2100 (With Auto Initialization)
Ordering code: B44066R....R240
Date: 2018-09-25
Version: 00

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Characteristics

- Intelligent control
- Menu driven handling in English language
- Test-run possible
- Large voltage measuring range
- Recall function of recorded values
- Four-quadrant operation
- Potential free contact alarm output (Optional)
- RS485 communication interface (Optional)
- Real Time Clock (Optional)
- Log of Time date stamping for last 3 system faults enabled
- Auto Initialization function
 - Input voltage connection detection (L-N\L-L)
 - Input Phase correction angle detection
 - Number of capacitor bank connected
- Three bank selection mode
 - Control series (upto 20)
 - User defined capacitor bank kvar
 - Auto detected capacitor bank kvar



Features

| | |
|-----------------------------|--|
| Display | <ul style="list-style-type: none"> - Large and multifunctional LCD (2 × 16 characters) - Graphic and alphanumeric - LCD illumination |
| System parameters displayed | <ul style="list-style-type: none"> - Line voltage (V AC) - Reactive power (kvar) - Active power (kW) - Frequency - Apparent power (kVA) - Line current (A) - Temperature (°C) - Real-time cos phi - Difference to PF - THD – V / THD - I in % upto 31st - Individual Harmonics in % upto 31st for V & I - Energy kWh (Import/ Export) - Energy kVAh - Energy kVARh (Inductive / Capacitive) - Demand kVA /Current - Run Hour – Number of hours load is connected |

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|------------------------|---|
| | <ul style="list-style-type: none"> - On Hour – Hours for which power supply is ON - No of interruption – Number of interruption for power supply. |
| Alarm output | <ul style="list-style-type: none"> - Out of Bank (Under Compensation) - Overcompensation - Under Voltage - Over Voltage - Undercurrent - Overcurrent - Over temperature - Under / Over Frequency - Excess Harmonics (V-THD / I-THD) |
| Recall recorded values | <ul style="list-style-type: none"> - Maximum / Minimum Voltage - Maximum / Minimum Current - Maximum / Minimum Frequency - Maximum Active Power - Maximum Apparent Power - Maximum Reactive Power - Maximum / Minimum Temperature - Maximum THD(V/I) - Switching count of Capacitor - Operation time of capacitor |
| Warning Messages | <ul style="list-style-type: none"> - Capacitor switching count exceed the limit - Capacitor Health Fault |

Technical Data

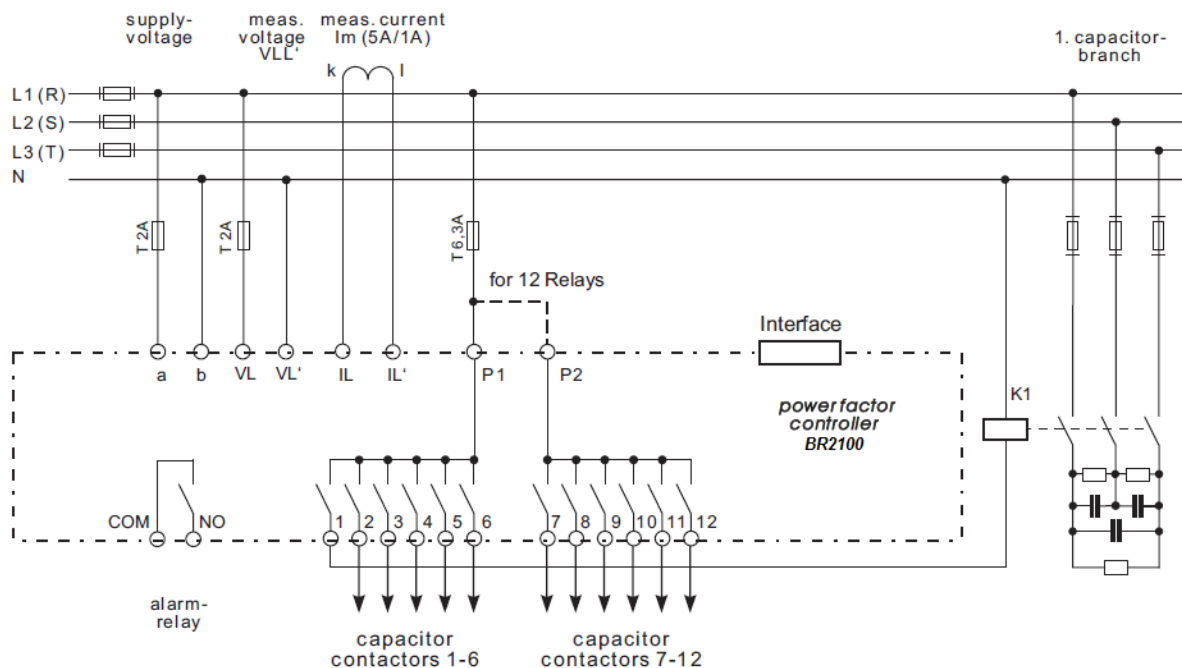
| | |
|---|--|
| Weight | 0.57 kg |
| Case | Panel-mounted instrument, 144 x 144 x 56 mm (cut out 142 ^{+0.8} x 142 ^{+0.8} mm) |
| Ambient conditions <ul style="list-style-type: none"> - Over-voltage class - Pollution degree - Operating temperature - Storage temperature - Sensitivity to EMC - Safety guidelines - Mounting position - Humidity class | <ul style="list-style-type: none"> III 2 -10 ... +60 °C -20 ... +65 °C IEC61326-1 IEC 61010-1:2010 Flush Mounting 15% ... 95% non-condensing |
| Protection class <ul style="list-style-type: none"> - Front plate | <ul style="list-style-type: none"> IP54 to IEC60529 IP20 to IEC60529 |

| | |
|---|---|
| - Rear side | |
| Operation <ul style="list-style-type: none"> - Auxiliary Supply voltage - Auxiliary Supply Frequency - Target cos phi - Switching On & Off - Discharge Time - Control modes | 110 V AC – 550VAC 40 to 70 Hz 0.8 ind. ... 0.8 cap. 10 s ... 30 min 60 s ... 30 min self-optimized intelligent control mode |
| Measurement <ul style="list-style-type: none"> - Measurement voltage range - Fundamental frequency - Measurement current (CT) - Minimum operating current - Maximum current - Accuracy | 30 ... 550 V AC (L–L / L–N) 50 / 60 Hz x/5 and x/1 Ampere onsite programmable 2 mA 6 A (sinusoidal) Current, voltage: 0.5% of nominal value Active, apparent power: 1% of nominal value Active Energy : 1% Apparent Energy : 1% Reactive Energy : 2% THD : ± 4% |
| Switching outputs Relay outputs <ul style="list-style-type: none"> - Number of outputs - Switching voltage/Power | 6 / 8 / 12 steps available Max. 250 VAC / 1000W |
| Alarm relay | Potential-free contact (Max. 250 VAC / 1000W) |

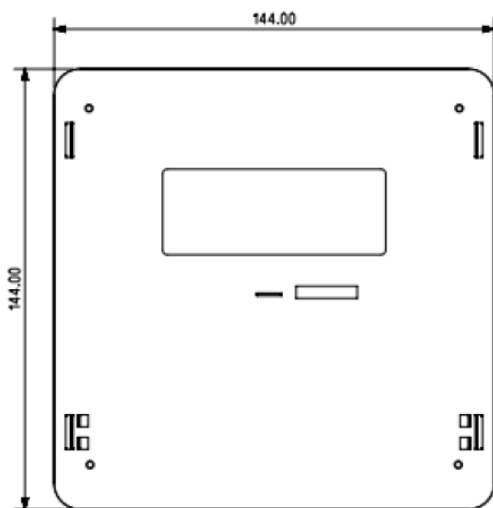
Ordering codes

| Type | Voltage | Output Relay | Alarm output | Interface (RS485) | RTC | Ordering code |
|--------|----------|--------------|--------------|-------------------|-----|-----------------|
| | 50/60 Hz | | | | | |
| BR2100 | 240 | 6 | Yes | No | No | B44066R2006R240 |
| BR2100 | 240 | 8 | Yes | No | No | B44066R2008R240 |
| BR2100 | 240 | 12 | Yes | No | No | B44066R2012R240 |

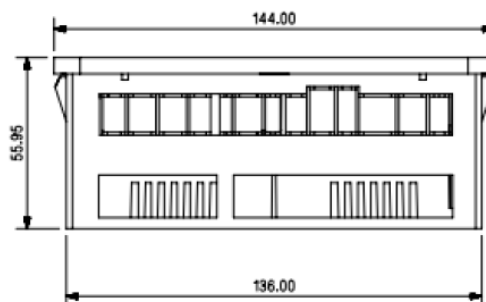
Connection plan



Dimensions :



FRONT VIEW



SIDE VIEW

⚠ 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 BR4001 with the actual system parameters (current transformer prim. and sec., Nominal Voltage, kvar steps, capacitor switching threshold, switching time).

⚠ 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.epcos.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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