



Film Capacitors – Power Factor Correction

Key components

Series/Type: Power factor controller series BR6000–T6R6, V5.0

Ordering code: B44066R6**6E230

Date: November 2009

Version: 1

Preliminary data
Characteristics

- 6 transistor outputs for direct triggering of thyristor modules TSM series for dynamic compensation
- 6 relay outputs for direct triggering of capacitor contactors for conventional compensation
- Intelligent behavior that logically combines both types of control of the output steps
- Menu driven handling (plain language)
Dutch/English/French/German/Polish/Portuguese/Russian/Czech/Spanish
- Self-optimizing control capability
- Large measuring voltage range
- Recall function of recorded values (V_{max} , kvar, kW, kVA, °C)
- Four-quadrant operation (e.g. standby generator)
- Powerful alarm output
- Control series editor (value perception selectable)
- 2nd target power factor
- Interface RS485 optional


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"> - System voltage (V AC) - Reactive power (kvar) - Active power (kW) - Frequency - Apparent power (kVA) - Apparent current (A) - Temperature (°C / °F) - Real-time cos φ - Target cos φ - kvar value to target cos φ - Display of values also as percentage
Alarm output	<ul style="list-style-type: none"> - Insufficient compensation - Overcompensation - Undercurrent - Overcurrent - Overtemperature - Threshold value programmable
Recall recorded values	<ul style="list-style-type: none"> - Maximum voltage, V_{max} - Maximum reactive power, Q (kvar) - Maximum active power, P (kW) - Maximum apparent power, S (kVA) - Maximum temperature, (°C)
Additional Features	<ul style="list-style-type: none"> - Internal error storage - 2nd signal relay random - Triggering time programmable

Preliminary data
Technical data

Weight	1 kg
Case	Panel-mounted instrument, 144 x 144 x 55 mm (cut out 138 x 138 mm)
Ambient conditions	
Overvoltage class	II
Pollution degree	2
Operating temperature	–20 ... 60 °C
Storage temperature	–20 ... 75 °C
Sensitivity to inference (industrial areas)	EN55082–2.1995
Spurious radiation (residential areas)	EN55011–10.1997
Safety guidelines	IEC61010–1:2001, EN61010–1:2001
Mounting position	Any
Humidity class	15 ... 95% without dew
Protection class	
Front plate	IP54 to IEC60529
Rear side	IP20 to IEC60529
Operation	
Supply voltage	110 ... 230 V AC, 50 and 60 Hz power lines
Target cos φ	0.3 inductive to 0.3 capacitive adjustable
Switching and discharge time range	20 ... 1000 ms / 1 ... 1200 s (dynamic / static section)
Number of control series	20 series preset + control series editor for free programming
Control modes	- Series switching (LIFO), - Circular switching (FIFO), - Self-optimized intelligent control mode
Measurement	
Measurement voltage range	30 ... 525 V AC (L–N) or (L–L)
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

Preliminary data

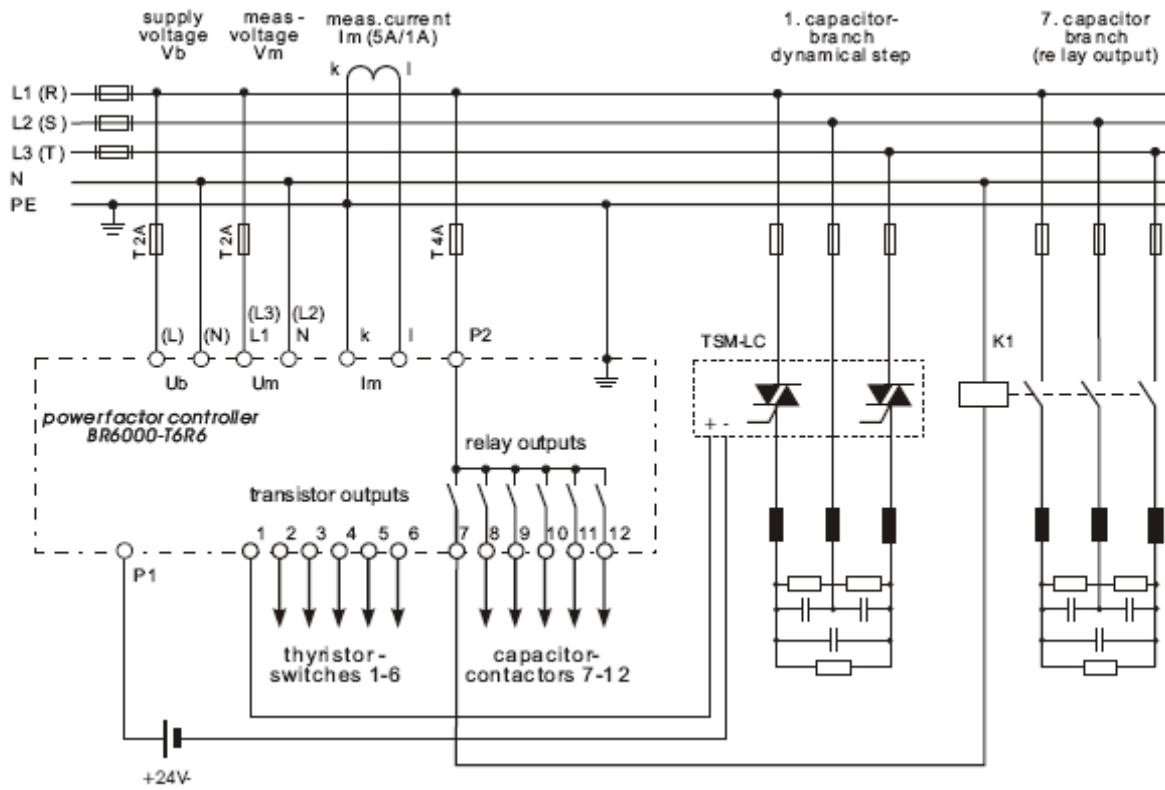
Switching outputs Output 1... 6: transistor Output 7...12: relay	6 steps (10 ... 24 V DC, 40 mA) 6 steps (230 V AC, 6 A)
Alarm relay Message relay	Potential-free contact (max. 250 V, 6 A) Potential-free contact (max. 250 V, 6 A) 2 nd target power factor programmable (activation via external input)
Interface	Optional RS485

Ordering codes

Type	Voltage 50/60 Hz V AC	Output		Alarm output	Switchover target cos φ 1/2	Inter- face	Ordering code
		Relay	Transistor				
BR6000-T6R6	110 ... 230	6	6	Yes	Yes	No	B44066R6066E230
BR6000-T6R6/S485	110 ... 230	6	6	Yes	Yes	RS485	B44066R6466E230

Preliminary data

Connection plan



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