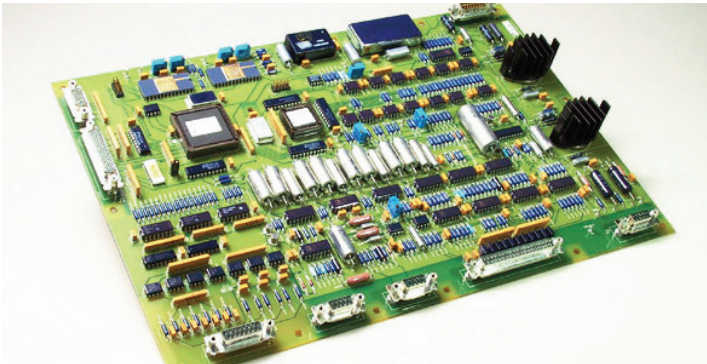


CCR
Constant Current Regulator



CCR

Constant Current Regulator

SYSTEM DESCRIPTION

The NBP 50KW CCR receives either 480 VAC or 2400 Volt $\pm 10\%$, 1 phase, 2 wire, 60Hz $\pm 3\%$ input power. It provides five regulated current levels while driving loads up to 50KW without any adjustments (no output tap changes required). It provides power with greater than 92% efficiency and 0.95 power factor at current level 5 (20 amps) for a load range of 30KW, 40KW and 50KW.

The NBP 50KW CCR is designed per FAA specification FAA-E-2689a. Its state machine controlled circuitry enables it to supply an output current with better than 2% accuracy for all variations in output load from short circuit to full load (50KW). The CCR is designed to automatically de-energize when an over current or open circuit condition is detected in the lighting loop. The CCR is equipped with a digital indicator that displays the output current measurement with better than 0.5% accuracy.

MAJOR FEATURES

- △ One (1) tap for auto range output up to 50 KW load
- △ Designed per FAA-E-2689a specification
- △ Air-cooled ferro-resonant transformer
- △ State machine control design for accurate regulation (better than 2%)
- △ Digital indicator to display output current, output open circuit, output over current, and input under voltage conditions
- △ Local and remote control capabilities
- △ Remote Monitoring capabilities for status and troubleshooting
- △ Minimum efficiency of 92%
- △ Minimum power factor of 0.95
- △ Power transfer capability under any load
- △ Under voltage, over voltage, over current, and open circuit shut off protection in less than 2 seconds.
- △ Input and output lightning protection

OPERATIONAL SPECIFICATIONS

Input power: 480 volt or 2400 VAC $\pm 10\%$, 60 Hz $\pm 3\%$, single phase, 2 wire
Input Current: 125 Amps (Max).

Output Current:

- △ Level 1: 8.5 ± 0.2 Amps
- △ Level 2: 10.3 ± 0.3 Amps
- △ Level 3: 12.4 ± 0.3 Amps
- △ Level 4: 15.8 ± 0.4 Amps
- △ Level 5: $20.0 \pm 0.0, -0.4$ Amps

ENVIRONMENTAL SPECIFICATIONS

Temperature: -10°C (14°F) to $+50^{\circ}\text{C}$ (122°F)
Relative Humidity: Up to 95%
Altitude: 3,048 meters (10,000 Feet)
EMI: MIL-STD-461 (CE03 and RE02)

