



CCR-- 1000 J/s Series
CCR-- 1500 J/s Series
CCR-- 2000 J/s Series
CCR-- 2500 J/s Series

Capacitor Charging Power Supplies
500V - 200 KV

User Facilities

LLC Series Resonant Converter
Current range from 17 mA to 3 A
Compact design
Protected against short & open circuit
Protected in arcing environments
Low charging current ripple
Repetition rates up to 200 Hz
End of charge without overshoot



CCR - 120 - N - 2500

Specifications on request

- Blank front panel
- Other voltage & current on request
- Other colour & logo on request
- Sequences programming (electronics or computing)
- Fibre optic
- Additional electronics on request
 - Isolated relay interface
 - Electric arcs detection
 - Electric arcs counting
 - ...

Applications

- Pulsed applications
- Capacitor banks
- Laser
- Electron Beam Processing
- Laboratory R&D

Description

LLC Series Resonant Converters (LLC-SRC) present the properties of zero-current-switching, incorporating the leakage inductance of the transformer into the converter design. This implies the decrease of the circuit complexity and the design facility. The control characteristics and components stresses are improved as compared with those of the conventional converters.

This TECHNIX technology allows to achieve performances never reached before: for the converter and the output filter (or multiplier) line together, the efficiency obtained is higher than 92 % !

The Technix CCR 1000 J/sec – 2500 J/sec series are available in 64 models from 1 kV to 200 kV with a 19" rack and 5 or 7 HU size.

Electrical Specifications

- **Output voltage and current :**

From 0 to 100 % adjustable in local mode by using potentiometer

From 0 to 100 % adjustable in remote control mode by an external voltage 0 to 10 V

- **Capability to reproduce the end of loading voltage :**

Load Regulation < 0.5 % (Reproducibility F < 10 Hz)

Line Regulation < 0.1 % (Main Voltage +/- 10 %)

- **Current Regulation**

Load Regulation < 0.5 % (0 – 100 %)

Line Regulation < 0.1 % (Main Voltage +/- 10 %)

- **Temperature Drift:** 0.01 % RMS after ¼hr. warm-up, 0.05 % RMS after 8 hours of functioning with constant load and ambient temperature.

- **Temperature Coefficient:** < 0.01 %/°C

- **Efficiency:** > 92 % full load

- **Main Voltage:** 400 VAC 47 – 63 Hz 3 phases + earth

- **Current Ripple + Noise:** < 0.2 %

- **Repetition frequency :** < 200 Hz max (up to 1 kHz on request)

Physical Specifications

- **Size :**

- 19" rack with 5 HU, H222 x W483 x D580 up to 15 kV.

- 19" rack with 5 HU, H222 x W483 x D580 + oil tank 7 HU - 19", H311 x W483 x D580 for higher voltages

- **Output Connector :** Appropriately rated high voltage shielded cable

- **Input connector :** 4 points Socapex model with female plug.

- **Front panel programming and control :**

- Main power general breaker

- Key switch

- Voltage & current control by 10 turn potentiometers resolution < 0.05 %

- 3 ½ digit display for voltage & current setting / read-out value, with 0.2 % accuracy

- HV on push button with green led indicator

- HV off push button with red led indicator

- OCL/OCP (over-current limitation, over-current protection) push button with 2 green led indicators

- Push button for reading voltage & current setting

- Main input voltage green led indicator

- Default red led indicator

- Open loop red led indicator

- End of charge green led indicator

- Current Regulation Mode red led indicator

- Local / Remote green led indicator

Available functions in Remote Control Mode

Output Voltage Prog. : adjustable 0–100 % with 0-10V

Output Current Prog. : adjustable 0-100 % with 0-10V

Voltage Monitor: 0 to 10V = 0 to 100 % output voltage

Current Monitor: 0 to 10V = 0 to 100 % output current

HV on/off Status: 0V = HV off, 15V - 1mA = HV on

Regulation mode : 0V = C Regulation, 15V – 1mA = V Regulation

Local/Remote Mode: 0V = remote, open collector = local

Inhibit: activated by TTL or CMOS signal (3.3V to 18V)

HV ON: closed to earth dry-contact

HV OFF: opened to earth dry-contact

Interlock: 0V = opened, 15V – 1mA = closed

Default: 0V = Default, 15V – 1mA = normal mode

+10V Reference: + 10V – 2mA

Remote connector

1. Local/Remote Mode
2. Inhibit
3. Current Monitor
4. Voltage Monitor
5. HV ON
6. Interlock (for remote safety)
7. Default
8. HV OFF
9. Ground Reference
10. HV on/off Status
11. Regulation Mode – End of charge
12. Output Voltage Programming
13. Ground Reference
14. +10V Reference
15. Output Current Programming

Options

- RS232, GPIB Interfaces
- LabVIEW software driving
- Regulation of the Power
- 4 ½digit display

EXAMPLE OF REFERENCE

CCR –120 – N – 2.500

Model

CC Model for Capacitor Charging

Voltage

Adjustable Voltage from 0 to **120** kVolts

Polarity

Négative Polarity

Power

Power : **2.500** Joules/seconde

Option

No option