



CCR-- 150 J/S Series  
CCR-- 300 J/S Series  
CCR-- 600 J/S Series  
CCR-- 750 J/S Series

Capacitor Charging Power Supplies  
500V - 200 KV

## User Facilities

**LLC Series Resonant Converter**  
**Current range from 2.5 mA to 600 mA**  
**Easy to use front panel**  
**Protected against transient events**  
**Electric arcs proof**  
**Low charging current ripple**  
**Repetition rates up to 200 Hz**  
**Output current & voltage pre-selected**



CCR - 40 - P - 600 - RS232

## 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

Modern power semiconductors combined with series & parallel L-C structure offer many desirable properties:

- The modulation part of the current is filtered, remaining only the desired sinusoidal waveform in the converter.
- Leakage inductance in the high voltage transformer is compensated by the serial inductance.
- Zero current switching (ZCS), associated with PWM techniques, reduces RFI interference.

These features, added with many others, show the equivalent model of this converter as a perfect current source. It seems to be particularly convenient for applications using capacitance systems.

The Technix CCR 150 J/sec – 750 J/sec series are available in 64 models from 1 kV to 200 kV and with a 19” rack and 3 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 1/2 hr. warm-up, 0.05 % RMS after 8 hours of functionment with constant load and ambient temperature.

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

- **Efficiency:** > 88 % full load

- **Main Voltage:** 230 VAC 47 – 63 Hz + earth

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

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

## Physical Specifications

- **Size :** 19" rack with 3 HU, H133 x W483 x D480

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

- **Input Connector:** CE22 model with female cable

- **Front panel programming and control :**

- Main power general breaker

- Key switch

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

- 3 1/2 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

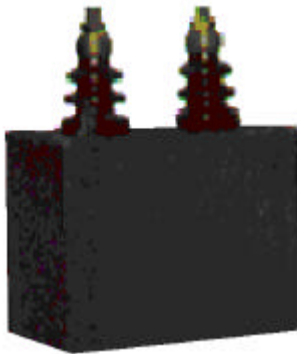
**+10V Reference:** + 10V – 2mA

## 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
- Power regulation
- 4 ½digit display



**Model : CCR – 100 – N – 300**  
**100kV – 6mA**