

DC High Voltage Capacitor Charging Power Supplies

150 J/s to 1kJ/s CCR Series

From 300 V to over 200 kV output voltage

CCR60kV-600J

0 to 60kV, 0 to 20mA

Non-contractual photo



Main information

- Compact & industrial design
- Double resonance technology (ZVC)
- Low stored energy
- High reliability & efficiency
- Voltage & Current outputs continuously adjustable from 0 to 100%
- Voltage setting limitation (locally)
- Voltage & Current Setting & monitoring from front panel or remote interface
- Customized Voltage & Current * with no extra cost
- High precision regulation
- Total protection against arc, overload, short circuit & over temperature
- Automatic Regulation crossover
- Over current limitation
- Remote, inhibit & interlock functions
- 4 ½ digit display with polarity display
- Safety switch key
- Air cooling
- 2 years warranty

* You can choose your own full scales (Vmax and Imax) even if these values are not available in standard.

For example, you can get a 3750 V generator based on 750 J/s model. In this case, you will get an output voltage adjustable from 0 to 3750 V and an output current from 0 to 0.4 A.

Description

High Voltage CCR models are designed to charge high voltage capacitors and Marx generators. They operate as constant current sources.

The numerous advantages of compactness, robustness, reliability, and saving offered with the double resonance technology are already available on these models which constitute the low-end range.

Four series of chargers are offered: 150J/s, 300J/s, 600J/s and 1kJ/s.

These chargers are all based on a 3U and 5U height 19" rack presentation. Using a modular design, our products integrate the latest technology components.

Above 20KV, HV blocks are in resin.





Electrical specifications

Output Voltage and output Current

Both Voltage Output and Current Output are continuously adjustable from 0 to 100 % (full scale)

Local mode: with 10 turns potentiometers *resolution 0.05%*

Remote mode: by an external 0 to 10 V

Maximum frequency

In standard : **10 Hz**

On request : **up to 1 kHz** depending on the application*

Reproducibility* (pulse to pulse voltage variation)

For frequencies ≤ 10 Hz : $\pm 0.05\%$ *better on request*

For $\pm 10\%$ mains voltage : $\pm 0.05\%$

Voltage holding: 0.1% p-p (*better on request*)

Stored energy: 0.2J/kJ

Protections

Against short circuit

HV arc to ground

Shutdown on Over temperature

Open interlock

Warm up shift of voltage (after one hour warm-up)

0.01 % / hour, operating at constant load and ambient temperature

Temperature coefficient: 100 ppm/°C

Operating temperature: from 0 to 50°C

Efficiency: > 90 % full load

Air cooling by air

Dust filter fans on front panel

Easily removable filters for cleaning

Mains voltage

170 to 255VAC 47-63 Hz Single Phase + Earth

Power factor correction Input: ≥ 0.98

Inrush current: limited to full power operating current

Calibration: with probes periodically approved by Authorized Measurement Laboratories

CE Certification

* For fixed polarity

Options

- ✓ Other voltage and current values available with no extra cost
- ✓ Easy parallel operation (For frequencies ≤ 10 Hz)
- ✓ Reversibility
- ✓ Floating outputs (unipolar or bipolar)
- ✓ Non instrumented front panel
- ✓ Automatic inhibit when discharging
- ✓ RS232, Ethernet and Profibus interfaces
- ✓ Optical fibre transmission kit with RS232 or Ethernet
- ✓ LABVIEW run time for RS232 or Ethernet
- ✓ Relay interface 24V DC
- ✓ Isolated Remote interface
- ✓ Adaptation customer to remote interface
- ✓ Emergency stop switch
- ✓ Safety signs and devices alerting to hazard
- ✓ Industrial dust filters
- ✓ Repetition frequency > 10Hz : no extra cost
- ✓ Multichannel control unit
- ✓ Zero floating
- ✓ Tropicalization
- ✓ Transportable "all terrain" container
- ✓ Specific AC or DC mains power inputs
- ✓ OEM Design on request
- ✓ Remote front panel

Any special requests can be considered

Possible restrictions when multiple options (please contact our sales department for more details)

Our chargers are designed to be used in standard under the following conditions :

- Complete discharge
- Max. frequency : 10 Hz
- Capacitor Load
- Reversal Voltage $\leq 10\%$ of V_{max} for a charging time between 0.1s and 5s

If the charger is used in other conditions, please fill in our charger form.



Physical description

Non-contractual photo



19" Rack	3U - 480 mm	3U - 600 mm	5U - 600 mm
Dimensions	H 133 x W 483 x D 480 mm	H 133 x W 483 x D 600 mm	H 222 x W 483 x D 600 mm

Voltage	CCR 150 J/s Series		CCR 300 J/s series		CCR 600 J/s Series		CCR 1000 J/s Series	
	Current	Model	Current	Model	Current	Model	Current	Model
< 1 kV	CONTACT US							
1 kV	300 mA	CCR1KV-150J	600 mA	CCR1KV-300J	1.2 A	CCR1KV-600J	2 A	CCR1KV-1000J
2.5 kV	120 mA	CCR2.5KV-150J	240 mA	CCR2.5KV-300J	480 mA	CCR2.5KV-600J	800 mA	CCR2.5KV-1000J
5 kV	60 mA	CCR5KV-150J	120 mA	CCR5KV-300J	240 mA	CCR5KV-600J	400 mA	CCR5KV-1000J
10 kV	30 mA	CCR10KV-150J	60 mA	CCR10KV-300J	120 mA	CCR10KV-600J	200 mA	CCR10KV-1000J
15 kV	20 mA	CCR15KV-150J	40 mA	CCR15KV-300J	80 mA	CCR15KV-600J	CONTACT US	
20 kV	15 mA	CCR20KV-150J	30 mA	CCR20KV-300J	60 mA	CCR20KV-600J		
30 kV	10 mA	CCR30KV-150J	20 mA	CCR30KV-300J	40 mA	CCR30KV-600J		
40 kV	7.5 mA	CCR40KV-150J	15 mA	CCR40KV-300J	30 mA	CCR40KV-600J		
50 kV	6 mA	CCR50KV-150J	12 mA	CCR50KV-300J	24 mA	CCR50KV-600J		
60 kV	5 mA	CCR60KV-150J	10 mA	CCR60KV-300J	20 mA	CCR60KV-600J		
80 kV	3.75 mA	CCR80KV-150J	7.5 mA	CCR80KV-300J	15 mA	CCR80KV-600J		
100 kV	3 mA	CCR100KV-150J	6 mA	CCR100KV-300J	12 mA	CCR100KV-600J		
120 kV	2.5 mA	CCR120KV-150J	5 mA	CCR120KV-300J	10 mA	CCR120KV-300J		
150 kV	2 mA	CCR150KV-150J	4 mA	CCR150KV-300J	8 mA	CCR150KV-600J		
200 kV	1.5 mA	CCR200KV-150J	3 mA	CCR200KV-300J	6 mA	CCR200KV-600J		
> 200 kV	CONTACT US							

Polarity can be positive, negative, reversible (option) or floating (option)
 Floating or reversibility options can modify the size of the unit

Example of reference : CCR 15KV-150J

Mode : CCR model (capacitor charger)
 Voltage : Adjustable from 0 to 15 kV
 J/s : 150 J/s charging power

All our chargers are delivered with :

HV output:
 HV connector and 3 meters HV cable

Mains input:
 2 meters CE22 cable

HV connectors and cables available

