

## DC High Voltage Generators 1.5kW to 8kW SR Series

From 300V to over 200kV output voltage



**SR 10kV-20kW**  
0 to 10 kV, 0 to 2A

*Non-contractual photo*

### Main information

- Compact & industrial design
- Low stored energy
- Low cost per Watt
- 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 reliability & efficiency
- 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
- Double resonance technology (ZVC)
- Safety switch key
- Air cooling with high reliability fans
- Fans regulations on 10kW series
- 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 4.5kV generator based on 6 kW model.

In this case, you will get an output voltage adjustable from 0 to 4.5 kV and an output current from 0 to 1.33A.

### Description

Double resonance technology operating at high frequency (40 kHz) improves reliability by a smooth switching of critical components

In addition, internal power dissipation, harmonics & ripples are significantly reduced.

Hence, our generators can intensively operate with no failure even in rugged environments. Many of them are used at full power 24 hours per day, 7days per week.

Five series of power are offered from 1.5kW to 8kW.

Above 20KV, HV blocks are isolated with oil.

With its low cost per Watt, this series is particularly well adapted in applications looking for power and performance at affordable prices.



## Electrical specifications

### Output Voltage and Output Current

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

**Local mode:** by using 10 turn potentiometers resolution 0.05%

**Remote mode:** by external 0 to 10V

### Voltage regulation\*

**Load Regulation:**  $\pm 0.05\%$  of full voltage (for 0 – 100% load)

$\pm 0.01\%$  available on request

**Line Regulation:**  $\pm 0.05\%$  of full load (for Mains Voltage  $\pm 10\%$ )

$\pm 0.01\%$  available on request

### Current regulation\*

**Load Regulation:**  $\pm 0.05\%$  of full current (for 0 – 100% load)

**Line Regulation:**  $\pm 0.05\%$  of full load (for Mains Voltage  $\pm 10\%$ )

### Ripple + Noise

**0.1% RMS** of full voltage

### Settling time

**80ms typical for output voltage  $\leq 80kV^{**}$** , up to 10ms available on request\*

### Protections

Short circuit

HV arc to ground (Stop time of 100ms)

Shutdown on Over temperature

Open interlock

**Stored energy:** 1 J/ kW

### Stability (after one hour warm-up)

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

**Temperature Coefficient:** 100 ppm/°C

**Operating Temperature:** from 0 to 50°C

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

### Air Cooling by air :

Dust filter fans on front panel

Easily removable filters for cleaning

### Mains Voltage

**400 VAC**  $\pm 10\%$  47 – 63 Hz 3 Phases + Earth

**Power Factor:**  $\geq 0.9$  at full load

**Inrush current:** limited to full power operating current

**Calibration:** with probes periodically approved by Authorized Measurement Laboratories

### CE Certification

\* For fixed polarity

\*\* 300 ms typical for output voltage  $\geq 81kV$

## Options

- ✓ Other voltage and current values available with no extra cost
- ✓ Reversibility
- ✓ Floating outputs (unipolar or bipolar)
- ✓ Non instrumented front panel
- ✓ Power regulation
- ✓ Other settings for Arc protection
- ✓ Arc management
- ✓ 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 to Customer's remote interface
- ✓ Emergency stop switch
- ✓ Safety signs and devices alerting to hazard
- ✓ Industrial dust filters
- ✓ Multichannel control unit
- ✓ Zero floating
- ✓ Adjustable rise time
- ✓ Tropicalization
- ✓ Transportable "all terrain" container
- ✓ Specific AC or DC mains power inputs
- ✓ OEM Design on request
- ✓ Remote front panel

*Any special request can be considered*

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

## Physical description

Non-contractual photo



	3U – 19" Rack	5U – 19" Rack	7U–19" Rack	19" Cabinet
Dimensions	H133xW483xD480 mm	H222xW483xD480 mm	H311xW483xD600 mm	Height : from 12 to 30 HU Depth : 800 mm
	H133xW483xD600 mm	H222xW483xD600 mm		

	SR 1.5 KW Series		SR 3 kW Series		SR 5 kW Series		SR 6 kW Series		SR 8 kW Series	
Voltage	Current	Model	Current	Model	Current	Model	Current	Model	Current	Model
300 V	5.0 A	SR300V-1.5KW	10.0 A	SR300V-3KW	16,67 A	SR300V-5KW	20,00 A	SR300V-6KW	26,67 A	SR300V-8KW
700 V	2.14 A	SR700V-1.5KW	4.29 A	SR700V-3KW	7,14 A	SR700V-5KW	8,57 A	SR700V-6KW	11,43 A	SR700V-8KW
1 kV	1.50 A	SR1KV-1.5KW	3.00 A	SR1KV-3KW	5,00 A	SR1KV-5KW	6,00 A	SR1KV-6KW	8,00 A	SR1KV-8KW
2.5 kV	600 mA	SR2.5KV-1.5KW	1.20 A	SR2.5KV-3KW	2,00 A	SR2.5KV-5KW	2,40 A	SR2.5KV-6KW	3,20 A	SR2.5KV-8KW
5 kV	300 mA	SR5KV-1.5KW	600 mA	SR5KV-3KW	1,00 A	SR5KV-5KW	1,20 A	SR5KV-6KW	1,60 A	SR5KV-8KW
10 kV	150 mA	SR10KV-1.5KW	300 mA	SR10KV-3KW	500 mA	SR10KV-5KW	600 mA	SR10KV-6KW	800 mA	SR10KV-8KW
15 kV	100 mA	SR15KV-1.5KW	200 mA	SR15KV-3KW	333 mA	SR15KV-5KW	400 mA	SR15KV-6KW	533 mA	SR15KV-8KW
20 kV	75.0 mA	SR20KV-1.5KW	150 mA	SR20KV-3KW	250 mA	SR20KV-5KW	300 mA	SR20KV-6KW	400 mA	SR20KV-8KW
30 kV	50.0 mA	SR30KV-1.5KW	100 mA	SR30KV-3KW	167 mA	SR30KV-5KW	200 mA	SR30KV-6KW	267 mA	SR30KV-8KW
40 kV	37.5 mA	SR40KV-1.5KW	NOT AVAILABLE		125 mA	SR40KV-5KW	150 mA	SR40KV-6KW	200 mA	SR40KV-8KW
50 kV	30.0 mA	SR50KV-1.5KW			100 mA	SR50KV-5KW	120 mA	SR50KV-6KW	160 mA	SR50KV-8KW
60 kV	25.0 mA	SR60KV-1.5KW			83.3 mA	SR60KV-5KW	100 mA	SR60KV-6KW	133 mA	SR60KV-8KW
80 kV	18.7 mA	SR80KV-1.5KW			62.5 mA	SR80KV-5KW	75 mA	SR80KV-6KW	100 mA	SR80KV-8KW
100 kV	CONTACT US				50 mA	SR100KV-5KW	60 mA	SR100KV-6KW	80 mA	SR100KV-8KW
120 kV			40 mA	SR120KV-5KW	50 mA	SR120KV-6KW	66.7 mA	SR120KV-8KW		
150 kV			CONTACT US							
200 kV										
> 200 kV										

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

### Example of reference : SR40KV-6KW

Mode : SR model (generator)  
Voltage : Adjustable from 0 to 40 kV  
Power : 6 kW

HV connectors and cables available

All our generators are delivered with :

#### HV output:

HV connector and 3 meters HV cable

#### Mains input:

3U rack: 4 pins connector

Other racks: 4 pins feed-through terminal

