

DC VOLTAGE 80KV TO 150KV
POWER FROM 1.5KW TO 40KW



SR serie are designed to offer optimal performance in a compact design. Oil isolated, SR Power Supply from 80kV to 150kV provides high reliability without any special maintenance.

APPLICATIONS

- Pulsed applications
- Capacitors
- Research and Development
- Test equipment
- Pulsed accelerators
- Beams (electron-ion)
- Tubes

MAIN SPECIFICATIONS

- Output Voltage: 80kV to 150kV
- Output Power: 1.5kW to 40.kW
- Polarity: Positive or Negative
- Rise-time(10-90%): <300ms
- Ripple+Noise:0.1% RMS of max output voltage
- Remote interface: 0-10V analog

TECHNICAL SPECIFICATIONS

FORMAT	19" Rack or 19" cabinet
EFFICIENCY	> 92% at full load
MAINS INPUT	400 VAC \pm 10%, 47-63 Hz 3 Phases + Earth
INPUT POWER FACTOR	\geq 0.90 at full load
INRUSH CURRENT	Limited to operating current at full power
REGULATION MODES	Constant Voltage (CV) and Constant Current (CC) regulations, automatic crossover. Power regulation on demand.
STATIC LOAD REGULATION	\pm 0.05% of full voltage or current, from no load to full load (lower on demand)
STATIC LINE REGULATION	\pm 0.05% of full voltage or current for \pm 10% mains voltage (lower on demand)
STABILITY (AFTER 1-HOUR WARM-UP)	100 ppm/hour, 300ppm/8 hours operating at constant load and temperature
PROTECTIONS	Short circuit, Arc quench, External interlock, Over temperature, Overload, Over voltage, Over current
STORED ENERGY	1 J/kW
ACCESSORIES	3m removable coaxial HV cable, interlock terminator, 2 safety keys

CONTROL

LOCAL CONTROLS	Mains power switch, safety lock, HV on, HV off, Over current mode, Preset, Limitation of voltage setting
OUTPUT VOLTAGE AND CURRENT SETTING	10 turn potentiometer (0.05% resolution) Continuously adjustable from 0 to 100%
VOLTAGE AND CURRENT DISPLAY	4.5 Digit
STATUS INDICATORS	HV on, HV off, Line, Fault, Interlock, Remote, Over current limitation/protection, Regulation mode
REMOTE CONTROL INTERFACE	0-10V Analog On demand: RS-232, Ethernet, 0-10V Isolated Analog, 0-10V Analog with 24V relay, Optical fiber
REMOTE CONTROL SOFTWARE	On demand Labview


OPERATING ENVIRONMENT

AMBIENT TEMPERATURE	From 0 to 50 °C
AMBIENT HUMIDITY	0 to 80% at 25°C, 50% at 40°C (non-condensing)
TEMPERATURE COEFFICIENT	100 ppm/°C
COOLING	Air forced Inlet through front panel (dust filters) Outlet at rear panel

STANDARDS AND REGULATIONS

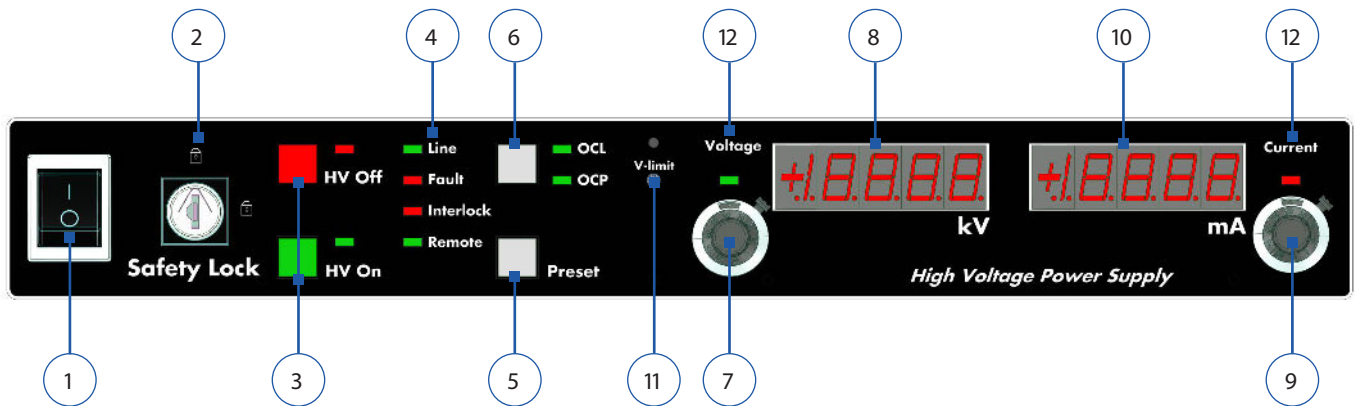
CE CERTIFIED AND ACCORDING	<p>Low voltage directive: 2014/35/EU</p> <p>EMC directive: 2014/30/EU</p> <p>RoHS directive: 2011/65/EU</p> <p>EN 61000-6-2: 2019</p> <p>EN 61000-6-4: 2019</p> <p>EN 61326-1: 2021</p> <p>EN 61000-3-2: 2019</p> <p>EN 61000-3-3: 2013 + A1: 2019</p> <p>EN 61010-1: 2010 + A1: 2019</p> <p>EUROLAB EMC decision n°11: issue 1 of 18 of December 2007</p>
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DOCUMENTATIONS AND SERVICES

DOCUMENTATIONS	<p>User manual</p> <p>Test report</p> <p>EU declaration of conformity </p> <p>RoHS2 declaration of conformity </p>
WARRANTY	<p>2 years</p> <p>Extension on demand</p>
ON DEMAND	<p>Witnessed Factory Acceptance Test (FAT)</p> <p>Detailed design report</p> <p>Custom tests</p> <p>Manufacturing process certification</p> <p>Special engineering</p>

INTERFACES

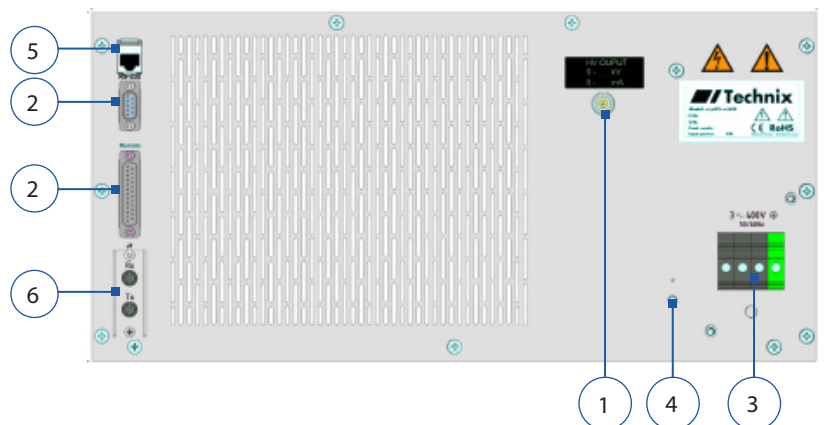
FRONT PANEL



- | | | |
|--------------------------|---|--------------------------------------|
| 1. ON/OFF switch | 4. Statuses (Line, Fault, Interlock, Remote) | 8. Voltage display |
| 2. Safety lock (key) | 5. Preset push button | 9. Current setting |
| 3. HV ON/OFF push button | 6. Over Current Limitation (OCL)
Over Current Protection (OCP) | 10. Current display |
| | 7. Voltage setting | 11. Local voltage setting limitation |
| | | 12. Regulation mode |

REAR PANEL

1. HV output
2. Analog interface
3. Mains input
4. Earth bolt
5. RS-232 (option)
6. Optical fiber (option)
7. Ethernet (option)



0-10V ANALOG INTERFACE

PIN	SIGNAL	SIGNAL DESCRIPTION	I/O	IMPEDANCE
1	HV-Off control	Produced by a fleeting opening from pin 16	Input	20Ω
2	Fault status	Internal Fault: 0V = Detected; +15V = No fault	Output	100Ω
3	Interlock status	External interlock: 0V = Open; +15V = Closed	Output	475Ω
4	HV-On control	Produced by a fleeting closing to pin 16	Input	20Ω
5	Output voltage measurement	0V to 10V = 0% to 100%	Output	475Ω
6	Output current measurement	0V to 10V = 0% to 100%	Output	475Ω
7	Inhibit control	Activated by digital signal between +5V to +24V	Input	
8	Remote control	Open contact = Local control mode Closed contact = Remote control mode	Input	20Ω
9	Not connected			
10	Arc monitor (Mains Monitor for older models)	Generates a signal when an arc is detected: +15V = No arc; 0V = Arc detected Older models (shipped before January 2023): Generates a fault if the mains input is failing: 0V = Mains is fine; +15V = Mains is failing	Output	100Ω
11	Output power measurement (option)	0V to 10V = 0% to 100% (option)	Output	475Ω
12	Local output voltage setting	Copy of the setting on the front panel potentiometer. 0V to 10V = 0% to 100%	Output	10Ω
13	Local output current setting	Copy of the setting on the front panel potentiometer. 0V to 10V = 0% to 100%	Output	10Ω
14	Remote output current setting	0V to 10V = 0% to 100%	Input	115Ω
15	+10V reference	+10V reference for analog signals, max current : 5mA	Output	2.7Ω
16	0V reference (digital signals)	0V ground reference for digital signals	Output	
17	Remote output voltage setting	0V to 10V = 0% to 100% of max output voltage	Input	115Ω
18	Regulation mode status or End of Charge status	DC power supply: Open contact = Current Regulation; +24V = Voltage Regulation CC power supply: Open contact = Capacitor charging; +24V = End of charge	Output	100Ω
19	HV-On status	0V = HV output disabled (HV Off) +15V = HV output enabled (HV On)	Output	100Ω
20	0V reference (analog signals)	0V ground reference for analog signals	Output	
21-22-23	Not connected			
24	External Interlock	Connect to pin 16 to close the interlock.	Input	500Ω
25	+10V Reference or Remote output power setting (option)	Standard: +10V reference for analog signals, max current : 5mA Option: 0V to 10V = 0% to 100% of max output power	Output	2.7Ω or 115Ω

OPTIONS

- Arc Management
- Parallel operation
- Custom remote interface
- Zero floating
- Emergency stop switch
- Adjustable rise time
- Special mains input
- Non Instrumented front panel
- Industrial dust filters
- Remote Front panel
- Power regulation
- Tropicalization
- Custom design

RANGES

MODEL REFERENCE: SR 80 kV to 150 kV - 1.5 kW to 40 kW

VOLTAGE

POWER

OUTPUT POWER	1.5 kW	5 kW	6 kW	8 kW	10 kW	12 kW	15 kW	16 kW	20 kW	30 kW	40 kW
OUTPUT VOLTAGE	Max Current										
80 kV	18.7 mA	62.5 mA	75 mA	100 mA	125 mA	150 mA	188 mA	200 mA	250 mA	375 mA	500 mA
100 kV	Contact us	50 mA	60 mA	80 mA	100 mA	120 mA	150 mA	160 mA	200 mA	Contact us	
120 kV	Contact us	40 mA	Contact us								
150kV	Contact us										

DIMENSION

MODEL 7U - 19" : 311 x 483 x 600 mm (H x W x D)

