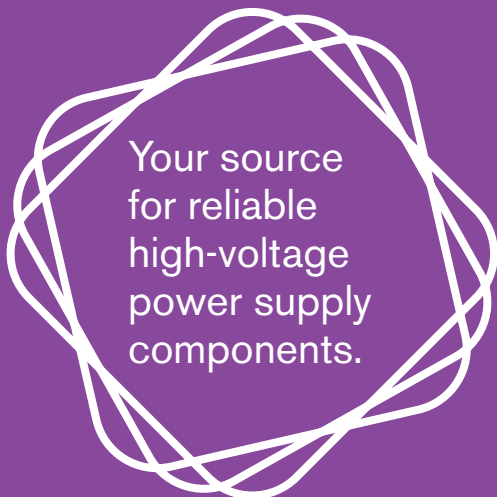


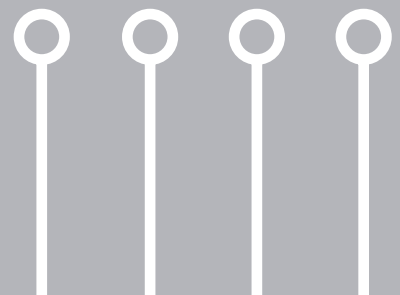


Systems Development & Solutions



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high-voltage  
power supply  
components.

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SDS is committed to serving its customers through the development of durable relationships that are founded on our promise to continually strive to meet their needs for quality high-voltage power supply equipment. We offer a wide array of devices with multiple configurations ranging from 100V to 25kV, with a maximum power output of 100W, as well as the remote command and control boards used to drive them.

Our products are designed and manufactured to be used in a wide array of professional domains where reliability, functionality, space saving and cost-effectiveness are essential to our customers' success. Customers that depend on our products work in domains including:

- light detection using photo-electronic detectors such as Photo Multiplier Tubes (PMT), semiconductor detectors such as Avalanche Photo Diodes (APD) or Multi-Pixel Photon Counters (MPPC), hybrid photo detectors (HPD) or light intensification systems like Micro Channel Plates (MCP)
- electro-optically Q-switched lasers with Pockels Cells
- capacitor charging applications

SDS clients are among the world's leading companies and research institutions. LMJ (Mega Joule Laser) from the CEA-CESTA, CERN (European Centre for Nuclear Research), CESR (Centre for Space Research on Radiation), CETP (Terrestrial and Planetary Environment Research Centre), IHEP (Institute of High Energy Physics in China), IN2P3/CNRS (National Institute for Nuclear and Particle Physics), Max-Planck-Institut für Physik, INFN (Istituto Nazionale di Fisica Nucleare), Pierre Auger Observatory, Synchrotron Soleil are just a few of our many satisfied customers around the world.

From off-the-shelf models through to custom designed components, SDS is dedicated to providing you with the right solution at the right price. Look inside for general information on our product line and, to learn more about SDS, please visit our website at [www.sdshv.com](http://www.sdshv.com). For further information, or speak to a sales representative, please call us on +33 (0)1 43 97 65 04 or contact us by e-mail at [contact@sdshv.com](mailto:contact@sdshv.com).

SDS offers a wide array of both standard and custom products in addition to those displayed here. We gladly provide expedient, economical and personalized component design and manufacturing services to our customers with special needs. For a complete product listing, please visit [www.sdshv.com](http://www.sdshv.com) or contact us at the numbers listed below.

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Miniature PCB-Mountable High-Voltage Power Supplies for OEM Applications																			
output power	0V	100V	200V	300V	400V	500V	600V	700V	800V	900V	1kV	2kV	3kV	4kV	5kV	6kV	7kV	8kV	9kV
	output voltage																		
100mW	<b>Micro APD Series</b>																		
	Input Voltage: 5Vdc, Ripple: 0,15% p-p, Output Voltage Monitor: STD, PCB Mount Metal Case: STD																		
200mW	<b>APD Series</b>																		
	Input Voltage: 5Vdc, 12 or 15Vdc, Ripple: <0,004% p-p, Output Voltage Monitor: STD, PCB Mount Metal Case: STD																		
300mW	<b>CC series</b>																		
	Input Voltage: 12Vdc, Ripple: 0,002% p-p, Output Voltage and Current Monitor: STD, PCB Mount Metal Case: STD																		
400mW	<b>LM series</b>																		
	Input Voltage: 24Vdc, Ripple: <0,0005% p-p, Output Voltage and Current Monitor: STD, PCB Mount Metal Case: STD																		
1W	<b>HPD series</b>																		
	Input Voltage: 5Vdc, Ripple: <0,025% p-p, Output Voltage Monitor: STD, PCB Mount Metal Case: STD																		
4W	<b>MT Series</b>																		
	Input Voltage: 12, 15 or 24Vdc, Ripple: <0,01% p-p, Output Voltage Monitor: STD, PCB Mount Metal Case: STD																		
6W	<b>DA Series</b>																		
	Input Voltage: 15 or 24Vdc, Ripple: 0.01% p-p, Output Voltage and Current Monitor: STD, PCB Mount Metal Case: STD																		
15W	<b>MMP Series</b>																		
	Input Voltage: 24Vdc, Ripple: <1% p-p, Output Voltage Monitor: STD, PCB Mount Metal Case: STD																		
4J/s	<b>DE Series</b>																		
	Input Voltage: 15 or 24Vdc, Ripple: 0.01% p-p, Output Voltage and Current Monitor: STD, PCB Mount Metal Case: STD																		
4J/s	<b>FBA Series</b>																		
	Input Voltage: 24Vdc, Ripple: <0.015% p-p, Output Voltage Monitor: STD, PCB Mount Metal Case: STD																		
4J/s	<b>MAF Series - capacitor charging module</b>																		
	Input Voltage: 24Vdc, High Stability down to 10ppm/°C, Output Voltage and Current Monitor: STD, PCB Mount Metal Case: STD																		

Non Instrumented High Voltage Power Supplies in Block Configuration																	
output power	0V	200V	400V	600V	800V	1kV	2kV	3kV	4kV	5kV	6kV	7kV	8kV	9kV	10kV	20kV	30kV
	output voltage																
7,5W	<b>CAM Series - for imaging equipment</b>																
	Input Voltage: 24Vdc, Ripple: 0.005% p-p, Output Voltage and Current Monitor: STD, Design: STD + CST																
5-20W	<b>IDC Series - general purpose applications</b>																
	Input Voltage: 24Vdc, Ripple: 0.05% p-p, Output Voltage and Current Monitor: STD, Design: STD + CST																
30-100W	<b>HDC Series - general purpose applications</b>																
	Input Voltage: 24Vdc, Ripple: 0.05% p-p, Output Voltage and Current Monitor: STD, Design: STD + CST																
24W	<b>TS Series - general purpose applications</b>																
	Input Voltage: 24Vdc, Trial Output, Output Voltage and Current Monitor: STD, Design: STD + CST																
3-5W	<b>Depollution Series - general purpose applications</b>																
	Input Voltage: 24Vdc, Single AC Output, Output Voltage and Current Monitor: STD, Design: STD + CST																
25J/s	<b>CCPS Series - capacitor charging module</b>																
	Input Voltage: 24Vdc, Ripple: 0.005% p-p, Output Voltage and Current Monitor: STD, Design: STD + CST																

Instrumented High Voltage Power Supplies in Bench Top or Rack-Mount Configurations													
output power	0V	200V	400V	600V	800V	1kV	2kV	3kV	4kV	5kV	6kV	7kV	
	output voltage												
3W	<b>IQ Series - up to 3 outputs</b>												
	Input Voltage: Mains, Output Voltage Monitoring: Local, High Voltage ON/OFF, Design: CST												
6W	<b>LBT Series - low power output</b>												
	Input Voltage: Mains, Output Voltage Monitoring: Local & Remote, High Voltage ON/OFF, Design: STD												
30W	<b>RP Series - reversible polarity</b>												
	Input Voltage: Mains, Output Voltage Monitoring: Local & Remote, High Voltage ON/OFF, Design: STD												
30W	<b>IQ-CI Series - up to 8 outputs</b>												
	Input Voltage: Mains, Output Voltage Monitoring: Local & Remote, High Voltage ON/OFF, Design: CST												

STD = Standard. CST =Custom

## Miniature PCB-mountable high-voltage power supplies for OEM applications



This category of low-cost, miniature DC-DC high voltage power supply units is specifically designed for very tight space requirements. Self-contained in compact and lightweight resin enclosures, all 8 product types in this category are mounted directly on the circuit board and, depending on the model, generate reduced power of up to 15W. They are powered by 5, 12, 15 or 24Vdc and generate up to 8kVdc in output power which is easily verified via the external voltage output power monitoring signal. Standard features include extremely reduced low line and load regulation, low ripple, high stability, and continuous short circuit protection.

Product	Input voltage	Output voltage	Output power	Available configurations
Micro APD Series	5Vdc	0 through 100V	100mW	2 standard models
APD Series	5Vdc, 12Vdc or 15Vdc	0 through 200V / 0 through 500V	100mW	32 standard models
HPD Series	5Vdc	0 through -8000V	400mW	1 standard model
MT Series	12Vdc, 15Vdc or 24Vdc	0 through 600V / 0 through 1500V	up to 1W	80 standard models
DA Series	15Vdc or 24Vdc	0 through 1000V / 0 through 4000V	1W through 4W	64 standard models
MMP-10/MMP-100 Series	24Vdc	0 through +4000V	4W	2 standard models
DE Series	15Vdc or 24Vdc	0 through 1000V / 0 through 4000V 0 through 6000V	6W 1W through 6W	56 standard models
FBA Series	24Vdc	0 through 300V / 0 through 400V	15W	8 standard models

## Complete socket assemblies for photomultiplier tubes



SDS custom manufactures complete power bases to match your photomultiplier's design specifications. We design socket assemblies consisting of a high-quality socket, a voltage divider circuit, and a high-voltage converter integrated into a light and compact resin tube. Powered by 5, 12, 15 or 24Vdc, these units can generate up to 3kVdc in voltage output which can be verified via external voltage and current output signals that are available as an option on some models. Standard features include extremely reduced low line and load regulation, low ripple, high stability, and continuous short circuit and electric arc protection.

Product	Description	Input voltage	Output voltage	Output power	Available configurations
FPB Series	Compact photomultiplier power base incorporating an SDS high voltage supply and a voltage divider	5Vdc, 12Vdc, 15Vdc or 24Vdc	0 through 100V / 0 through 3000V	0.24W through 6W	Custom design solutions upon request

## Instrumented high-voltage power supplies in bench-top or rack-mount configurations



This category of high-voltage power supplies is recommended for research and laboratory activities. AC powered on the universal voltage range, the 3 product types in this category provide exceptional flexibility in output voltage and polarity and, depending on the model, can provide from one to eight high-voltage outputs that can reach 6kVdc at output power up to 30W. The units operate in either local or remote mode, and are easily controlled via a serial port or an off-site host bus adapter allowing for the use of various protocols. Each model is an instrumented unit offered in a built-in table panel, or located in the bay. Standard features include a clear output voltage display; a power grid input; positive, negative or reversible polarity; extremely reduced low line and load regulation; low ripple; high stability; and overload protection.

Product	Description	Input voltage	Output voltage	Output power	Available configurations
LBT Series	Low-power bench top power supply	universal 85-264Vac	0 through 100V / 0 through 6000V	0.1W through 6W	90 standard models
RP Series	Reversible polarity power supply	universal 85-264Vac	0 through $\pm 100V$ / 0 through $\pm 6000V$	0.1W through 6W	45 standard models
IQ Series	Multiple output (from 2 to 3) channels high-voltage power supply	universal 85-264Vac	3 channels from 0 through 1500V	3W per channel	Custom design solutions upon request

## Non-instrumented high-voltage power supplies in block configuration



This category of compact, modular, DC-DC and DC-AC high-voltage power supplies is designed to meet the needs of instrumentation manufacturers where cost and space restrictions are important. Depending on the model, the 6 product types in this category deliver output power that can reach up to 100W. They are powered at 24Vdc and can generate from one to three high-voltage outputs reaching up to 25kVdc. Each model can be internally or externally programmed, and output voltage can be displayed on an external power output display unit. Standard features include extremely reduced low line and load regulation, low ripple, high stability, and continuous short circuit protection.

Product	Description	Input voltage	Output voltage	Output power	Charging power	Available configurations
CCPS Series	Capacitor charging module	24Vdc	+2500V through +25kV	-	25J/s	1 standard model
CAM Series	Power supply with high level of EMC	24Vdc	0 through -15kV	7.5W	-	1 standard model
HDC Series	High-power / high-voltage module	24Vdc	0 through 1000V / 0 through 8000V	30W, 50W or 100W	-	60 standard models
IDC Series	Medium-power / high-voltage module	24Vdc	0 through 10kV / 0 through 25kV	5W, 10W or 20W	-	48 standard models
TS Series	Triple output DC/ AC high-voltage power supply	24Vdc	Vout 1: +6500V Vout 2: -8500kV Vout 3: 4600Vrms	Pout 1: 6.5W Pout 2: 24W Pout 3: 4.5W	-	1 standard model
Depollution Series	Single output DC/ AC high-voltage power supply	24Vdc	3300Vrms	3.3W	-	2 standard models
			5000Vrms	5W		

## High-voltage pulse generators



SDS high-voltage pulse generators, based on field-effect transistor technology, provide the remarkable feature of being introducible into lightweight and reduced-size obstruction cases. GIPO generators can produce pulses up to 5.5kV, with a rise time of just a few nanoseconds (generally 2.5ns), with an adjustable pulse length as short as 200ns and as long as 30µs for charge capacitive loads. The GIPO is available either in block configuration or as a stand-alone unit.

Product	Description	Input voltage	Output voltage	Pulse rising edge	Available configurations
GIPO Series*	High voltage pulse generator (block configuration)	24Vdc	-500V through -5.5kV	2.5ns typical on a load of 2pF	1 standard model
GIPO-SAU Series*	Stand-alone unit containing either 1 or 2 GIPOs	24Vdc or universal 85-264Vac	-500V through -5.5kV	2.5ns typical on a load of 2pF	2 standard models

\* Patented – Under license from the French “Commissariat à l’Energie Atomique” (C.E.A.)

## Control boards



The COM-IO Series, AC powered on the universal voltage range and with an integrated output voltage display, offers excellent output voltage flexibility by providing multi-channel, various voltage sources that can simultaneously or individually power several DC-DC converters or power supplies in local or remote modes. When used in remote operation mode, they can be integrated with RS232/RS485 serial interfaces or equipped with an off-site host bus adapter for various protocols including Profibus-DP V0 and V1, CANopen, DeviceNet, Ethernet 10Mbits, Fast Ethernet 10/100Mbits, Interbus, Lonworks, I<sup>2</sup>C.

Product	Description	Input voltage	Control	Output voltage	Available configurations
COM-IO Series	Rack-mounted command & control operation board	universal 85-264Vac	0/1V through 0/10V	5V through 48V	Custom design solutions upon request