LBT Series

AC-DC high voltage, low power, bench-top power supply

SYSTEMS DEVELOPMENT & SOLUTIONS

52 standard products
Reference : LBT-xxxx-x (see chart for complete reference)
Vin : universal 85-264Vac
Vout : 0 to 100V through 0 to 8000V
Pout : 0.1W to 6W

Compact high voltage AC-DC bench-top power supply with adjustable output voltage.

For stand-alone operation, this power supply is fitted with front panel controls.
For remote operation, it is fitted either with analogical controls or with numerical controls such as a serial interface supporting a RS232/RS485 serial port or a field bus adapter for protocols such as Profibus-DP V0 and V1, CANopen, DeviceNet, Ethernet 10Mbits, Fast Ethernet 10/100Mbits, Interbus, Lonworks, I²C.
(interface or protocol must be precised in specifications).

The LBT Series houses a HV converter which belongs to our miniature pcb-mountable dc-dc converters' family that you can discover on www.sdshv.com.

- bench-top configuration
- single positive or negative output
- a wide range of outputs
- current and/or voltage monitoring
- available in either analogical or digital versions
- protection against overload, short circuit and arc

Parameters	Specifications
Input voltage Vin	universal 85-264 VAC
Mains ON/OFF controls	switch on rear panel
Output voltage Vout	from 0-100V through 0-8000V
Output power Pout	from 0.1W to 6W depending on the model
Polarity	positive or negative depending on the model
Load voltage regulation	± 0.01% of full output voltage for no load to full load - typically and according to type
Line voltage regulation	± 0.01% of full output voltage over specified input voltage range - typically and according to type
Residual ripple	< 0.05% typically and according to type
Temperature coefficient	100ppm/°C (higher stability upon request)
Safeguards	screw plug for grounding on rear panel

	Local mode specifications	Remote mode specifications	
		digital version	*analogical version*
Local / remote mode High Voltage ON/OFF Voltage setting	via front panel controls	▪ via RS 232 ▪ or field bus	via analogical signals on SUBD9 connector on rear panel

	Local mode monitoring	Remote mode monitoring	
		digital version	*analogical version*
Output voltage monitoring Output current monitoring *(only available with some models – refer to Selection Guide)*	on LCD display on front panel	▪ via RS 232 ▪ or field bus	via analogical signals on SUBD9 connector on rear panel

Mechanical configuration	
Insulation	high voltage assembly fully potted in an epoxy resin or another specially selected material
Case	high quality light grey ABS material
Dimensions	L199 x W157.5 x H62.2 mm
Mains input	IEC 320 type AC connector fuse (L 500mA) on rear panel
High voltage connector	secured SHV connector on rear panel
Accessories to order separately	SHV cable URM70 – length to order

For further electrical specifications, please refer to the corresponding datasheet of each type of HV converter used in the LBT box. Please download from our website : www.sdshv.com

Our Web Site : www.sdshv.com
Our e-mail : contact@sdshv.com

5, bvd de Créteil 94100 Saint-Maur-des-Fossés – France
Tel : 33(0)1 43 97 65 04 Fax : 33(0)1 48 85 82 70

Marking

MADE IN FRANCE

5 Bdv de Créteil, 94100
St-Maur-des-Fossés, France
Tel : 33 (0) 1 43 97 65 04
http://www.sdshv.com

LBT Series
LBT-DAP202501-10
Serial N°: 36080825
+2 KV ⎓ 500 µA

1- Digital ground 0V
2- Inhibition input
3- Current monitoring
4- Voltage monitoring
5- 10V reference

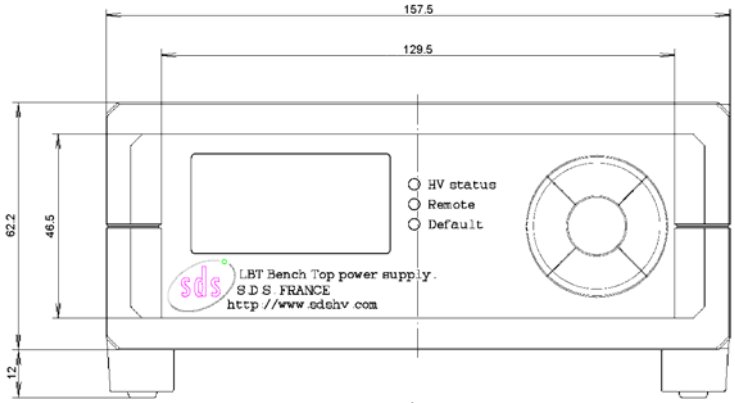
6- Local/Distant mode
7- NC
8- Analogical ground 0V
9- Voltage control input
SH- Shield

CE

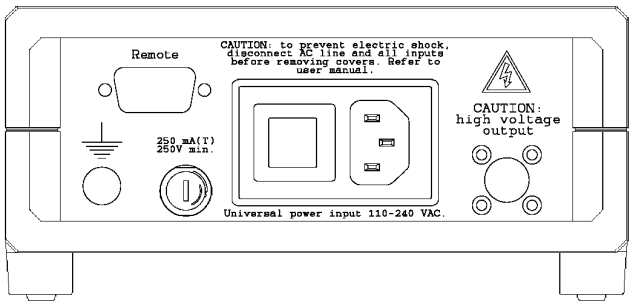
RoHS Compliant Product

Example of label for model with DA +2kV 500µA with 0/10V controls

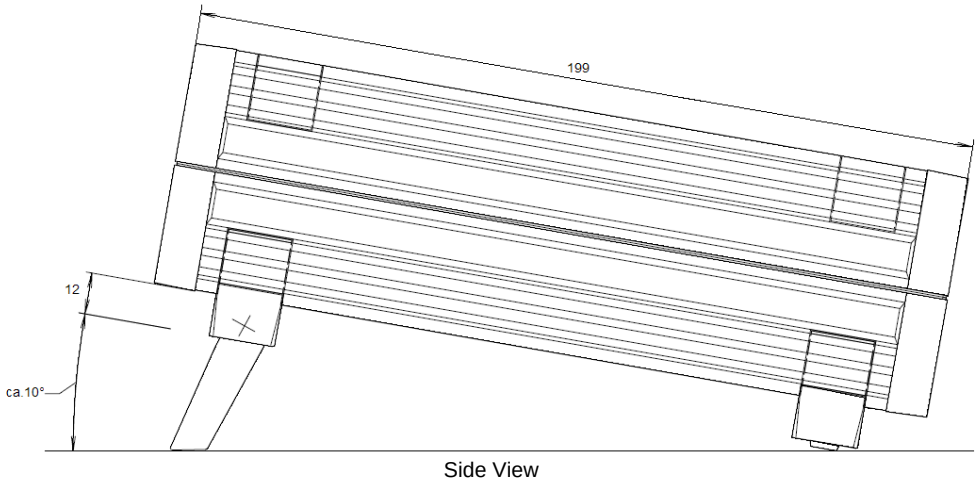
Mechanical Dimensions



Front View



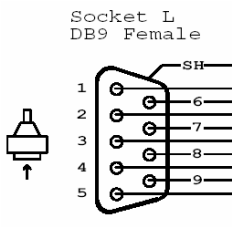
Rear View



Side View

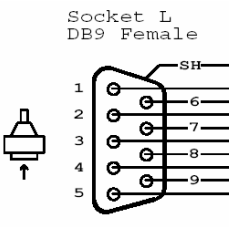
I/O Connections on Remote Connectors

Digital RS-232 SUBD9 (according to standard EIA232 Data Communication Equipment (DCE) standard)



Data exchange :	1. NC
(transmit data)	2. TX
(receive data)	3. RX
	4. NC
	5. GND
Flow control :	6. NC
(clear to send)	7. CTS
(request to send)	8. RTS
	9. NC
Shielding :	SH. Shield

Analogical Remote SUBD9



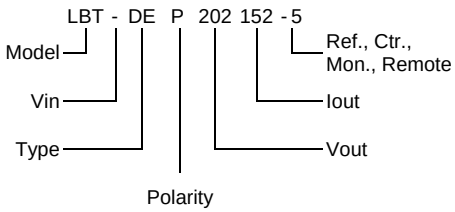
Digital ground :	1. D_GND
Inhibition input :	2. HV_ON/OFF
Current monitoring :	3. HVM_C
Voltage monitoring :	4. HVM_V
Reference :	5. REF
Remote mode :	6. LOCAL/DIST
	7. NC
Analogical ground :	8. A_GND
Voltage control input :	9. HVC_V
Shielding :	SH. Shield

If you prefer a version for field bus adapter, SDS can adapt the product to better suit your need provided you inform us of the type of remote connector you want to use.

Ordering Information

Model	name of the series	LBT
Vin	universal 85-264Vac	-
Type[1]	Micro APD Series or APD Series	APD
	CC Series	CC
	DA Series	DA
	DE Series	DE
	HPD Series	HPD
	MT Series	MT
Polarity	positive output voltage	P
	negative output voltage	N
Vout	output voltage	*see Ordering Code*
Iout	output current	*see Ordering Code*
Reference, Control, Monitoring *(valid only for the analogical version)*	2.5Vdc	2
	4Vdc	4
	5Vdc	5
	10Vdc	10
Remote interface *(valid only for the digital version)*	RS232	RS
	other	*refer to us*

Example



+2kV@6W psu with 0/5V analog command for setting and monitoring

[1] In order to select the right type of HV converter that will be integrated into the LBT box to assess your need, please refer to the datasheets of these products which are available on our website: www.sdshv.com.

Ordering Code :

- The power supply units have a 6-digit ordering code;
- The first 3 digits concern the output voltage in V
  - the first 2 digits indicate the output voltage value
  - the last digit indicates the multiplier
- The last 3 digits concern the output current in µA
  - the first 2 digits indicate the nominal output current value
  - the last digit indicates the multiplier

Ordering Examples :

- The ordering code of a +2kV@6W psu with a 5V reference is : LBT-DEP202152-5
- The ordering code of a -4kV@4W psu with RS232 is : LBT-DAN402102-RS

5, bvd de Créteil 94100 Saint-Maur-des-Fossés – France
Tel : 33(0)1 43 97 65 04 Fax : 33(0)1 48 85 82 70

LBT Series Selection Guide

Vout	Iout / Pout	Polarity	Model	Monitoring Vout	Monitoring Iout
8000V	50µA / 0.4W	-	LBT-HPDN802500-(2)	●	
6000V	1mA / 6W	+	LBT-DEP602102-(2)	●	●
		-	LBT-DEN602102-(2)	●	●
	660µA / 4W	+	LBT-DEP602661-(2)	●	●
		-	LBT-DEN602661-(2)	●	●
	330µA / 2W	+	LBT-DEP602331-(2)	●	●
		-	LBT-DEN602331-(2)	●	●
	160µA / 1W	+	LBT-DEP602161-(2)	●	●
		-	LBT-DEN602161-(2)	●	●
4000V	1.5mA / 6W	+	LBT-DEP402152-(2)	●	●
		-	LBT-DEN402152-(2)	●	●
	1mA / 4W	+	LBT-DAP402102-(2)	●	●
		-	LBT-DAN402102-(2)	●	●
	500µA / 2W	+	LBT-DAP402501-(2)	●	●
		-	LBT-DAN402501-(2)	●	●
	250µA / 1W	+	LBT-DAP402251-(2)	●	●
		-	LBT-DAN402251-(2)	●	●
2000V	3mA / 6W	+	LBT-DEP202302-(2)	●	●
		-	LBT-DEN202302-(2)	●	●
	2mA / 4W	+	LBT-DAP202202-(2)	●	●
		-	LBT-DAN202202-(2)	●	●
	1mA / 2W	+	LBT-DAP202102-(2)	●	●
		-	LBT-DAN202102-(2)	●	●
	500µA / 1W	+	LBT-DAP202501-(2)	●	●
		-	LBT-DAN202501-(2)	●	●
	100µA / 0.2W	+	LBT-CCP202101-(2)	●	●
1500V	700µA / 1W	+	LBT-MTP152701-(2)	●	
		-	LBT-MTN152701-(2)	●	
1250V	0.8mA / 1W	+	LBT-MTP122801-(2)	●	
		-	LBT-MTN122801-(2)	●	
1000V	6mA / 6W	+	LBT-DEP102602-(2)	●	●
		-	LBT-DEN102602-(2)	●	●
	4mA / 4W	+	LBT-DAP102402-(2)	●	●
		-	LBT-DAN102402-(2)	●	●
	2mA / 2W	+	LBT-DAP102202-(2)	●	●
		-	LBT-DAN102202-(2)	●	●
	1mA / 1W	+	LBT-DAP102102-(2)	●	●
		-	LBT-DAN102102-(2)	●	●
		+	LBT-MTP102102-(2)	●	
		-	LBT-MTN102102-(2)	●	
600V	1.6mA / 1W	+	LBT-MTP601102-(2)	●	
		-	LBT-MTN601102-(2)	●	
500V	200µA / 0.1W	+	LBT-APDP501201-(2)	●	
		-	LBT-APDN501201-(2)	●	
400V	250µA / 0.1W	+	LBT-APDP401251-(2)	●	
		-	LBT-APDN401251-(2)	●	
300V	330µA / 0.1W	+	LBT-APDP301331-(2)	●	
		-	LBT-APDN301331-(2)	●	
200V	500µA / 0.1W	+	LBT-APDP201501-(2)	●	
		-	LBT-APDN201501-(2)	●	
100V	1mA / 0.1W	+	LBT-APDP101102-(2)	●	
		-	LBT-APDN101102-(2)	●	

(2) specify the value or letters indicated in the Ordering Information table by referring to line “Reference, Control, Monitoring” for an analogical device, or by referring to line “Remote interface” for a digital device.

Other output voltages and output currents are available upon request. Do not hesitate to ask us about any parameter you would like to see changed for your application.

Our Web Site : www.sdshv.com
Our e-mail : contact@sdshv.com
5, bvd de Créteil 94100 Saint-Maur-des-Fossés – France
Tel : 33(0)1 43 97 65 04 Fax : 33(0)1 48 85 82 70