

LABORATORY POWER SUPPLIES

Laboratory power supplies from GMC-I Messtechnik, known as **GOSSEN KONSTANTERs**, combine modern circuit technology with a broad range of functions and absolute reliability.

Our KONSTANTERs can be ideally incorporated into demanding applications in the field of research and development, as well as into production and (continuous) test systems. Depending upon power, linear regulators and switching controllers are used with a high degree of efficiency.

Due to their exceptionally short response times, type SLP, SSP and ultramodern SYSKON KONSTANTERs are especially well suited for generating complex test signals, or for superimposing low-frequency signals to the output via analog control inputs.

Data storage provided by SSP and SYSKON models makes it possible to save UI time profiles, and to run the respective sequences automatically.

Depending upon the device, available interfaces include analog, RS 232, IEEE 488 (GPIB) or USB.



SHORT RESPONSE TIMES

ACCURATE MEASURED VALUES / SETTINGS

HIGHLY RELIABLE

EXTENSIVE SAFETY FUNCTIONS

INTERFACE VARIANTS

FREE OPERATING SOFTWARE (FROM WEBSITE)



Sensational Response Times

Highly Precise Setting and Measured Values

High Output power

Extensive Safety Functions OVP, OCP, OTP, RVP

Interfaces: AN IF, RS232, USB or GPIB

Deactivatable Sink Function

Free Operating Software (from website)

Programmable Test Signal Generator

SYSKON P Series Article: see table



SYSKON P series KONSTANTERs (SYSTEM KONSTANTER, programmable) are single output, computer controlled laboratory power supplies for demanding professional use in R&D, production and test systems.

Equipped with active power-factor control (PFC), these models deliver 1500, 3000 or 4500 W of power, depending upon device type, at up to 60 V and max. 60, 120 or 180 A with characteristic UIP curve. Special switching controller technology and matching status controllers provide for high dynamics and sensationally short response times of less than 2 ms. The setting range for output voltage

and output current can be restricted by specifying setting limits. The analog interface is equipped with two programmable trigger inputs and three signal outputs, which can be linked to various device functions for indication, or for controlling external devices and an auxiliary power output. Monitor outputs and control inputs for voltage and current setpoints are also available. Sensing leads allow for auto-sensing operation at the power consumer. Strict menu-driven operation simplifies the use of highly diverse programming functions. The devices are transformed into freely programmable test-signal generators by means of an expanded sequence memory.

- Auto-ranging output with 1500, 3000 or 4500 W
- Very short response times (rise and fall times)
- Excellent dynamic control parameters
- Output: voltage, current and power regulated
- Minimal residual ripple
- Mains input with power-factor control
- Highly efficient, low power loss
- Output on/off function
- Sink mode operation (can be deactivated)
- Lockable controls
- Master-slave operation for parallel and series connection
- Overvoltage, overcurrent and overtemperature protection

- Sequence functions with sequence control for creating voltage and current sequences
- Comprehensive calibration report

Scope of delivery:

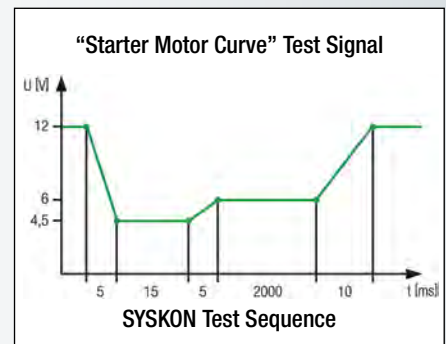
- SYSKON KONSTANTER
- Mains power cable (for SYSKON P1500 only)
- USB cable (90° angle)
- Installation set for rack mounting
- DAkkS calibration certificate
- CD with drivers and operating software (D, GB), plus data sheet
- Operating instructions (printed)

Optional accessories:

- IEEE 488 interface
- 3-phase mains cable for SYSKON P3000 and P4500

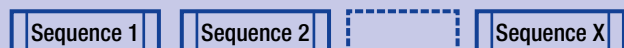
Software:

- GM-SYSKON-SFP operating software (free download)
- Drivers for LabVIEW, LabWindows / CVI, Agilent VEE

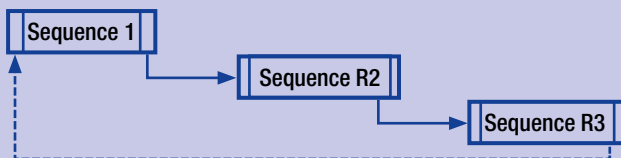


- **Sequence memory:**
1700 locations for sequence functions

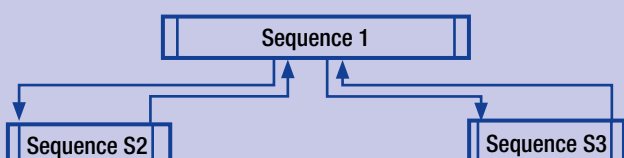
- **Setup memory:** 15 memory locations for complete configurations



Sequence stringing

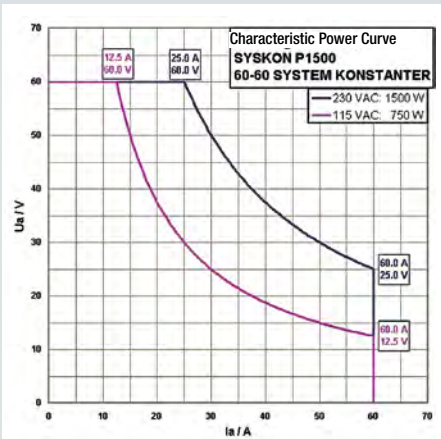


Invocation of sub-sequences from primary sequences

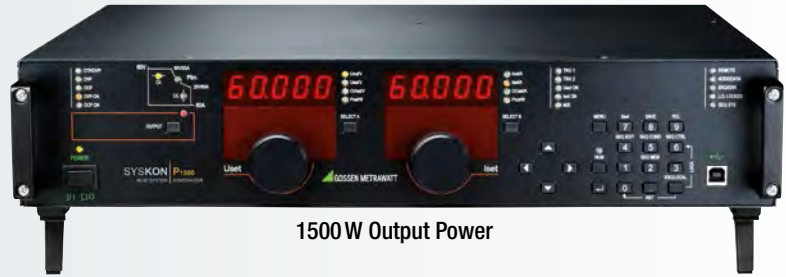




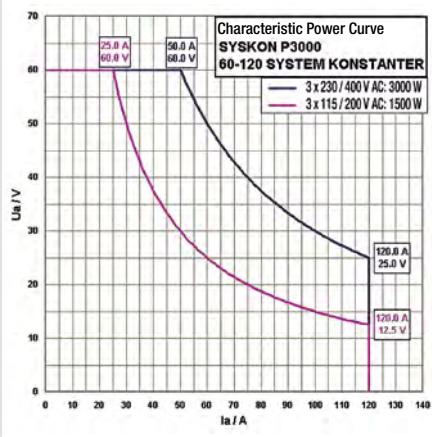
Output's Working Range



SYSKON P1500



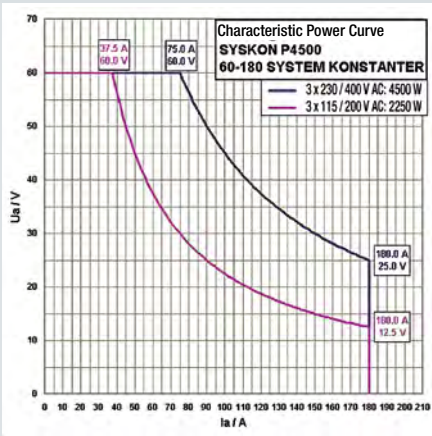
1500 W Output Power



SYSKON P3000



3000 W Output Power



SYSKON P4500



4500 W Output Power

Type	Power	Voltage	Current	Dimensions (W x H x D in mm)		Weight (approx. kg)	Article
	P_{nom} [W]	U_{Set} [V]	I_{Set} [A]	Benchtop Instrument	19" Rack		
SYSKON P1500 (1500 W)	1500	0 ... 60	0 ... 60	447 x 102 x 541	2 standard height units x 501	10	K353A
SYSKON P3000 (3000 W)	3000	0 ... 60	0 ... 120	447 x 191 x 541	4 standard height units x 501	16	K363A
SYSKON P4500 (4500 W)	4500	0 ... 60	0 ... 180	447 x 191 x 541	4 standard height units x 501	20	K364A
IEEE 488 interface	—	—	—	—	—	—	K384A
3-phase mains cable, 3 m	—	—	—	—	—	—	K991B

Extremely Short Response Times

Programmable Test Signal Generator

SSP 32N-KONSTANTER 120 to 320 Article: see table

SSP32N KONSTANTER 120, 240 and 320 devices (single output system power supplies) are single output computer controlled laboratory power supplies for universal use in R&D, production and testing.



BET circuit technology (bidirectional energy transformation) allows for rise and decay times of less than 1 ms almost entirely independent of load (< 4 ms with 80 V device). The analog interface includes monitor, auxiliary power and programmable signal outputs, as well as setpoint and programmable trigger inputs. This also makes it possible to adjust internal output impedance for the simulation of weak batteries.

- Auto-ranging output with 120 W, 240 W or 320 W
- Increased output power for brief intermittent periods
- Minimal power loss
- Constant voltage and constant current operating modes
- Sink mode (static/dynamic)
- Sequence functions with sequence control for creating voltage and current sequences
- Extremely short response times thanks to BET technology

- Minimal residual ripple
- Output on/off function
- Master-slave operation for parallel and series connection
- Bridging of two instruments for the generation of bipolar voltages
- Overvoltage, overcurrent, polarity reversal and overtemperature protection
- Lockable controls
- Calibrating procedure for menu-driven balancing
- Comprehensive test report
- Floating output terminals at front and rear panels
- Can be electrically and mechanically combined into multi-output devices
- Analog interface (standard equipment)
- RS 232 port (standard equipment)
- IEEE 488 interface (optional)

Scope of delivery:

- SSP-KONSTANTER
- Mains power cable with earthing contact plug
- Test report
- Operating instructions

Optional accessories:

- IEEE 488 interface
- IEEE 488 and RS 232 cable
- Installation sets for rack mounting
- Mains jumper cable

Software: (beginning on Page 103)

- Drivers for LabVIEW, LabWindows / CVI, Agilent VEE
- GM SSP-SFP operating software

120 W / 240 W



320 W

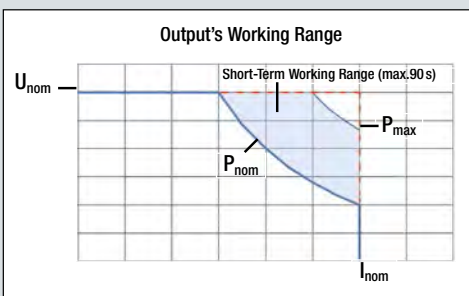


■ Sequence memory: 245 locations for sequence functions

Sequence 1

Sequence 2

Sequence X



Type	Power		Voltage	Current	Dimensions (WxHxD in mm)		Weight (approx. kg)	Article
	P _{nom} [W]	P _{max} [W]	U _{nom} [V]	I _{nom} [A]	Benchtop Instrument	19" Rack		
120 W	120	200	0 ... 20	0 ... 10	221.5x102.0x397.5	½ 19" x 2 standard height units x 400	2.9	K320A
	120	240	0 ... 40	0 ... 6				K321A
	120	240	0 ... 80	0 ... 3				K322A
240 W	240	320	0 ... 20	0 ... 20	221.5x102.0x397.5	½ 19" x 2 standard height units x 400	2.9	K330A
	240	360	0 ... 40	0 ... 12				K331A
	240	360	0 ... 80	0 ... 6				K332A
320 W	320	430	0 ... 32	0 ... 18	221.5x102.0x397.5	½ 19" x 2 standard height units x 400	3.4	K334A
IEEE 488 interface					—	—	0.1	K380A





SSP 62N/64N-KONSTANTER 500 to 3000 Article: see table

SSP KONSTANTER 500, 1000, 2000 and 3000 devices (single output system power supplies) are single output computer controlled laboratory power supplies for universal use in R&D, production and testing.

Special circuitry allows for jumping from 0 V to nominal voltage ($0V \rightarrow U_{Nom}$) and from $U_{Nom} \rightarrow 0V$ under nominal load conditions within very short response times of less than 10 ms.

The analog interface includes monitor and auxiliary power outputs, as well as programmable trigger and setpoint inputs.

- Auto-ranging output with 500 W, 1000 W, 2000 W or 3000 W
- Very short response times thanks to special circuit concept
- Excellent dynamic control parameters
- Minimal power loss
- Output: voltage and current regulated
- Minimal residual ripple
- Remote sensing
- Lockable controls
- Sink mode, dynamic
- Output on/off function

- Lockable controls
- Sequence functions: sequence control for creating voltage and current sequences
- Master-slave operation for parallel and series connection
- Overvoltage, overcurrent, polarity reversal and overtemperature protection
- Rear panel connections:

Output: bus bars with holes for M8 screws and 4 mm diameter

Analog Interface

Mains input, 62N: inlet plug with protective contact – L + N + PE

Mains input, 64N: screw-terminal block – 3 L + N + PE



Scope of delivery:

- SSP-KONSTANTER
- Mains power cable(SSP 62N)
- Installation set for rack mounting
- Operating instructions

Optional accessories:

- IEEE 488 + RS 232 interface
- RS 232 interface
- 3-phase cable for SSP 64N models with 16 A 5-pin CEE plug

Software: (beginning on Page 103)

- SSP Soft Front-Panel
- Drivers for LabVIEW, LabWindows/CVI, Agilent VEE

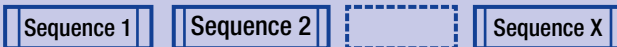
SSP 62N Models
500 W and 1000 W



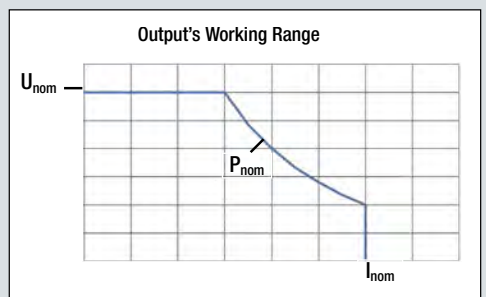
SSP 64N Models
2000 W and 3000 W



■ Sequence memory: 245 locations for sequence functions



Type	Power	Voltage	Current	Dimensions (W x H x D in mm)		Weight (approx. kg)	Article
	P_{nom} [W]	U_{Set} [V]	I_{Set} [A]	Benchtop Instrument	19" Rack		
500 W	500	0 ... 52	0 ... 25	449 x 101 x 500	2 s. h. u. x 500 ¹⁾	12	K344A
	500	0 ... 80	0 ... 12.5				K341A
1000 W	1000	0 ... 52	0 ... 50	449 x 101 x 500	2 s. h. u. x 500	13	K345A
	1000	0 ... 80	0 ... 25				K343A
2000 W	2000	0 ... 52	0 ... 100	449 x 190 x 500	4 s. h. u. x 500	22	K352A
	2000	0 ... 80	0 ... 50				K351A
3000 W	3000	0 ... 52	0 ... 150	449 x 190 x 500	4 s. h. u. x 500	28	K362A
	3000	0 ... 80	0 ... 75				K361A
IEEE 488 + RS 232 interface				—	—	—	K382A
RS 232 interface				—	—	—	K383A
3-phase mains cable, 3 m				—	—	—	K991B



¹⁾ s. h. u. = standard height units

MSP 64D-KONSTANTER Article: see table



The MSP-KONSTANTER (multi-output system power supply) offers extensive flexibility, ease of operation and economy for universal use in R&D, production and testing.

2-Quadrant Working Range (source & sink)

Up to 8 Output Channels

Individualized Configuration

The MSP KONSTANTER is a modular, manually operated and computer controlled DC power supply. The basic unit with integrated auxiliary power supply and cooling fan is equipped with IEEE 488 and RS 232 interfaces, and accepts up to four single or 2-channel plug-in power supply modules, and one control module. The control module allows for manual operation of all 8 channels. The plug-in modules function in accordance with the linear controller principle, and the outputs have a 2 quadrant operating range (source and sink). Source and sink functions are possible for constant voltage as well as constant current operation. Parallel or series connection, as well as bridging for the generation of bipolar voltages, is also possible.

- Easy, flexible device configuration
- Switchable mains input: 230 V AC/115 V AC
- Up to 8 independent, electrically isolated outputs
- All outputs can be used as electronic loads as well
- Short response times and minimal residual ripple
- Output on/off function
- Outputs can be activated and deactivated individually or in groups
- Measuring function for voltage, current and power with threshold memory
- Help texts available in various languages by simply pressing a key
- IEEE 488 and RS 232 interface Standard

Included with Basic Instrument:

- MSP 64D basic instrument
- Mains power cable with earthing contact plug
- 5 blanking plates for unused module slots
- Installation set for rack mounting
- Operating instructions

Plug-in power supply modules and control module are not included with the basic instrument.

Optional accessories (Page 105):

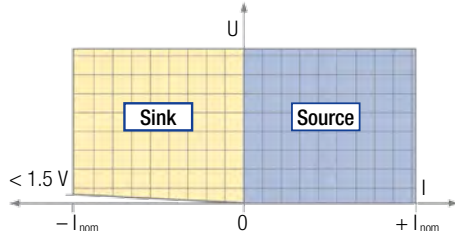
- IEEE 488 and RS 232 bus cable

Software (Page 103):

- Free driver software for LabVIEW, LabWindows/CVI, Agilent VEE (download from website)



Output's Working Range



Type	Power	Voltage	Current	Dimensions (W x H x D in mm)		Weight (approx. kg)	Article
	P_{nom} [W]	U_{Set} [V]	I_{Set} [A]	Benchtop Instrument	19" Rack		
MSP 64 N 42 P – basic device				448 x 177 x 390	4 s. h. u. x 440	6.6	K370A
MSP control module				—	—	0.7	K371A
ES31	2x24	2x0...8	2x0...±3	—	—	3.3	K372A
	2x24	2x0...16	2x0...±1.5	—	—	3.3	K372B
	2x24	2x0...40	2x0...±0.6	—	—	3.3	K372C
	1x49	0 ... 7	0 ... ±7	—	—	3.3	K372D
ES32	1x120	0 ... 30	0 ... ±4	—	—	6.8	K373A
	1x120	0 ... 80	0 ... ±1.5	—	—	6.8	K373B



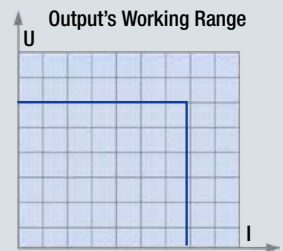
LSP 32K-KONSTANTER Article: see table



Series LSP 32K KONSTANTERs (laboratory and system power supply) are linear controlled power supplies for use in R&D, production, service and training applications. The devices are distinguished by outstanding ease of operation, excellent regulating accuracy and minimal residual ripple.

- Processor controlled
- Serial device interface
- Output can be switched on and off
- Voltage and current regulating
- Rotary encoder for adjusting U_{Set} and I_{Set}
- Adjustment is also possible with keys
- Multifunctional LCD panel
- Memory for 10 device configurations
- Protective devices
- Benchtop instrument, suitable for mounting to a 19" rack

- Scope of delivery:**
- LSP-KONSTANTER
 - Mains power cable with earthing contact plug
 - Operating instructions
- Optional accessories:** (Page 105)
- Interface adapter for USB, RS 232
- Software:** (Page 103)
- Power Management System



Type	Power	Voltage	Current	Dimensions (W x H x D in mm)		Weight (approx. kg)	Article
	P_{nom} [W]	U_{Set} [V]	I_{Set} [A]	Benchtop Instrument	19" Rack		
LSP 32K	90	0...18	0...5	215 x 100 x 280	$\frac{1}{2}$ 19" x 2 standard height units x 243 + 45mm	6.0	K110A
	108	0...36	0...3				K111A
	108	0...72	0...1.5				K112A

ANALOG CONTROLLED LABORATORY POWER SUPPLIES: 120 W to 320 W

SLP 32N-KONSTANTER 120 to 320 Article: see table



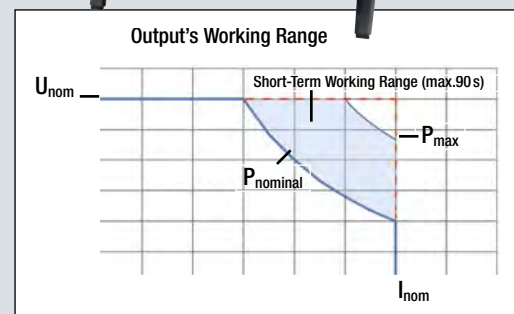
Series SLP 32N KONSTANTERs (single-output laboratory power supplies) are analog controlled, single output laboratory power supplies for universal use in R&D, production, training and service applications.

SLP 32N KONSTANTERs are equipped with the same nominal output values and outstanding control characteristics as the SSP 32N series. However, in this case the output parameters are not set by means of processor controlled operating elements or via a PC interface, but rather in the traditional manner with ten-turn potentiometer. Measured values and setpoints for output voltage and current can viewed at two

4-place digital displays. However, an analog interface for remote control and coupling purposes (also included with series SSP 32N instruments) is included here as well.

- Scope of delivery:**
- SLP-KONSTANTER
 - Mains power cable with earthing contact plug
 - Operating instructions

- Optional accessories:** (Page 105)
- IEEE 488 interface
 - IEEE 488 and RS 232 cable
 - Installation sets for rack mounting
 - Mains jumper cable



Type	Power	Voltage	Current	Dimensions (W x H x D in mm)		Weight (approx. kg)	Article
	P_{Out} [W]	U_{Set} [V]	I_{Set} [A]	Benchtop Instrument	19" Rack		
120 W	120	0...20	0...10	221.5 x 102.0 x 397.5	$\frac{1}{2}$ 19" x 2 standard height units x 400	2.7	K220A
	120	0...40	0...6				K221A
	120	0...80	0...3				K222A
240 W	240	0...20	0...20				K230A
	240	0...40	0...12				K231A
	240	0...80	0...6				K232A
320 W	320	0...32	0...18			3.2	K234A



Load KONSTANTER – **SSL 32EL** Article: see table

SSL 32EL Load KONSTANTERs (single-channel system load) are programmable electronic loads with a maximum sink power of 150 W or 300 W.

They're used for loading direct voltage sources with constant current, resistance or power in an adjustable fashion. Their range of applications includes testing power packs, batteries, PV modules, fuel cells etc.

- 3 operating modes: CC, CR and CP
- Settings selected by means of rotary encoder and keypad
- PC control via optional interface adapter
- High resolution measurement of U, I and P
- Multifunctional, illuminated LCD panel
- Memory for 10 setting values with time regulated sequence control (at least 1 second per step)
- Extensive protective functions: OV, OC, OP, OT, RV
- Load on/off switching function
- Controls can be password protected

Scope of delivery:

- Load KONSTANTER
- Mains power cable with earthing contact plug
- Operating instructions

Optional accessories: (Page 105)
Interface adapter for USB / RS 232

Software (Page 103):

- Eload Management System



Load KONSTANTER – **SPL** Article: see table

SPL Load KONSTANTERs (single-channel programmable load) are programmable electronic loads with a maximum sink power of 250 W or 400 W and outstanding dynamic control characteristics.

They're used for loading direct voltage/current sources with constant current, resistance, voltage or power in an adjustable fashion. Their range of applications includes static and dynamic testing of power packs, batteries, PV modules, fuel cells etc.

- 4 operating modes: CC, CV, CR and CP
- 17 bit adjusting resolution and 24 bit measuring resolution
- Adjustable rate of current rise: 0.1 mA to 4 A per μ s
- High-speed sequencing and transients function
- Short-circuit and battery discharging function
- Memory for 7 sequences with up to 50 steps each (at least 10 μ s per step)
- Low load voltage: < 0.6 V at max. current
- Load on/off switching function
- Multifunctional, illuminated LCD panel
- Extensive protective functions: OV, OC, OP, OT, RV
- PC control via RS 232 port or optional IEEE 488 interface with SCPI commands or LabVIEW driver

Scope of delivery:

- Load KONSTANTER
- Mains power cable with earthing contact plug
- Operating instructions

Optional accessories:

- IEEE 488 interface

Software (Page 103):

- LabVIEW device driver

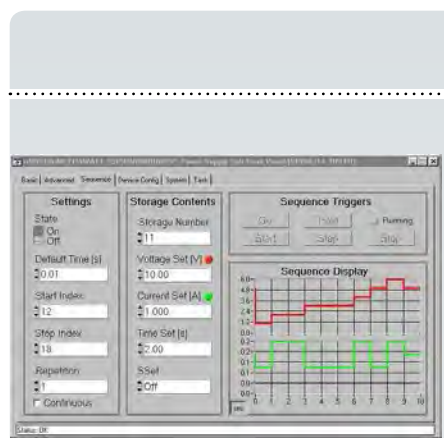


Type	Power	Voltage	Current	Resistance	Dimensions (W x H x D in mm)		Weight (approx. kg)	Article
	P _{Set} [W]	U _{Set} [V]	I _{Set} [A]	R _{Set} [Ω]	Benchtop Instrument	19" Rack		
SSL 32EL 150	0.1 ... 150.0	0.001 ... 360.0	0.001 ... 30.00	0.01 ... 500.0	215 x 100 x 280	1/2 19" x 2 s. h. u. x 243 +0 45mm	5.0	K850A
SSL 32EL 300	0.1 ... 300.0	0.001 ... 360.0	0.001 ... 30.00	0.01 ... 500.0				K851A
SPL 250-30	0.001 ... 250.00	0.001 ... 80.000	0.0001 ... 30.000	0.0200 ... 2000	226 x 110 x 414	1/2 19" x 2 s. h. u. x 350 +0 45mm	5.8	K852A
SPL 400-40	0.001 ... 400.00	0.001 ... 80.000	0.0001 ... 40.000	0.0200 ... 2000				K853A
IEEE 488 interface							0.1	K890A



Software	KONSTANTER Series							
	SYSKON P	SSP 32N	SSP 62N/64N	MSP 64D	LSP 32K	SSL 32EL	SPL	
Device driver for NI LabVIEW	■	■	■	■	–	–	■	
Device driver for NI LabWindows/CVI	■	■	■	■	–	–	–	
Device driver for NI Agilent VEE	■	■	■	■	–	–	–	
SYSKON Soft Front-Panel	■	–	–	–	–	–	–	
SSP Soft Front-Panel	–	■	■	–	–	–	–	
POWER Management System	–	–	–	–	■	–	–	
ELOAD Management System	–	–	–	–	–	■	■	

Free Download



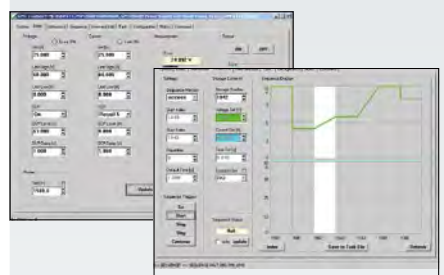
Device Drivers for NI LabVIEW, NI LabWindows/CVI and Agilent VEE

Device drivers for simple integration of our programmable laboratory power supplies and electronic loads into automated measuring and test systems which are controlled by the specified software packages are available for download from our website free of charge.

SSP Soft Front-Panel – PC User Interface for SSP-KONSTANTER

All SSP KONSTANTER functions can be controlled and displayed at a PC with this Windows software. Additional devices can be individually operated by starting the SFP more than once.

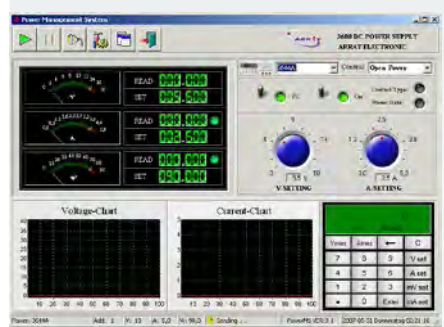
- For the RS 232 and the IEEE 488 (GPIB) interface
 - Runs under Windows 2000, XP, Vista and 7
 - Automatic search for SSP devices at all available interfaces
 - Menu language: English
- Prerequisite: NI-VISA driver and additional NI-488.2 driver (National Instruments) must be installed for control via GPIB.



SYSKON Soft Front-Panel – PC User Interface for SYSKON P Series

This Windows software can be used to interactively control and display all SYSKON functions from a PC. Additional devices can be individually operated by starting the SFP more than once.

- For USB, RS 232 and IEEE 488 (GPIB) interface
- Runs under Windows 2000, XP, Vista and 7
- Automatic search for SSP devices at all available interfaces
- Menu language: English



Power Management System – PC User Interface for LSP-KONSTANTER 32K

Series 32K LSP Konstanter functions can be interactively controlled and displayed at a PC with this Windows software.

- For USB and RS 232 interface
 - Runs under Windows 2000, XP, Vista and 7
 - Menu language: English
- Prerequisite: K910A or K910B interface adapter (see Page 105)



Eload Management System – PC User Interface for SSL 32EL Electronic Load

Series SSL 32EL electronic load functions can be interactively controlled and displayed at a PC with this Windows software.

- For USB and RS 232 interface
 - Runs under Windows 2000, XP, Vista and 7
 - Menu language: English
- Prerequisite: K910A or K910B interface adapter (see Page 105)



Overview Laboratory Power Supplies

Type	Article	Max. Power		Setting Range		Setting Accuracy		Residual Ripple		Interfaces				Sink Mode	Overvoltage Protection	Auto-Ranging Output	Output On/Off	Query Measured Values	Sequence Control	
		Duration [W]	< 90 s [W]	U_{set} [V]	I_{set} [A]	U_{set} ± (% + mV)	I_{set} ± (% + mA)	U [mV _{TRMS}]	I [mA _{TRMS}]	Analog	RS 232	USB	IEEE 488							
Programmable Laboratory Power Supplies																				
LSP 32 K 18 R 5	K110A	90	–	0...18	0...5	0.1+20	0.2+20	< 1	< 5	–	◆	◆	–	–	–	–	■	■	–	
LSP 32 K 36 R 3	K111A	108	–	0...36	0...3	0.1 + 20	0.2 + 20	< 1	< 4	–	◆	◆	–	–	–	–	■	■	–	
LSP 32 K 72 R 1.5	K112A	108	–	0...72	0...1.5	0.1 + 20	0.2 + 20	< 1	< 3	–	◆	◆	–	–	–	–	■	■	–	
MSP Plug-In Modules																				
SSP 32 N 20 RU 10 P	K320A	120	(200)	0...20	0...10	0.15 + 30	0.4 + 35	10	25	■	■	–	◆	Dyn.	■	■	■	■	■	
SSP 32 N 40 RU 6 P	K321A	120	(240)	0...40	0...6	0.15 + 40	0.5 + 20	10	20	■	■	–	◆	Dyn.	■	■	■	■	■	
SSP 32 N 80 RU 3 P	K322A	120	(240)	0...80	0...3	0.15 + 80	0.5 + 10	10	10	■	■	–	◆	Dyn.	■	■	■	■	■	
SSP 32 N 20 RU 20 P	K330A	240	(320)	0...20	0...20	0.15 + 40	0.5 + 70	15	50	■	■	–	◆	Dyn.	■	■	■	■	■	
SSP 32 N 40 RU 12 P	K331A	240	(360)	0...40	0...12	0.15 + 45	0.5 + 45	15	25	■	■	–	◆	Dyn.	■	■	■	■	■	
SSP 32 N 80 RU 6 P	K332A	240	(360)	0...80	0...6	0.15 + 80	0.5 + 25	15	20	■	■	–	◆	Dyn.	■	■	■	■	■	
SSP 32 N 32 RU 18 P	K334A	320	(430)	0...32	0...18	0.15 + 50	0.5 + 70	30	50	■	■	–	◆	Dyn.	■	■	■	■	■	
SSP 62 N 52 RU 25 P	K344A	500	–	0...52	0...25	0.1 + 17	0.2 + 25	10	15	■	◆	–	◆	Dyn.	■	■	■	■	■	
SSP 62 N 80 RU 12.5 P	K341A	500	–	0...80	0...12.5	0.1 + 20	0.2 + 15	10	15	■	◆	–	◆	Dyn.	■	■	■	■	■	
SSP 62 N 52 RU 50 P	K345A	1000	–	0...52	0...50	0.1 + 17	0.2 + 50	10	25	■	◆	–	◆	Dyn.	■	■	■	■	■	
SSP 62 N 80 RU 25 P	K343A	1000	–	0...80	0...25	0.1 + 20	0.2 + 25	15	20	■	◆	–	◆	Dyn.	■	■	■	■	■	
SSP 64 N 52 RU 100 P	K352A	2000	–	0...52	0...100	0.1 + 17	0.25 + 100	10	80	■	◆	–	◆	Dyn.	■	■	■	■	■	
SSP 64 N 80 RU 50 P	K351A	2000	–	0...80	0...50	0.1 + 20	0.25 + 50	15	30	■	◆	–	◆	Dyn.	■	■	■	■	■	
SSP 64 N 52 RU 150 P	K362A	3000	–	0...52	0...150	0.1 + 17	0.3 + 150	10	120	■	◆	–	◆	Dyn.	■	■	■	■	■	
SSP 64 N 80 RU 75 P	K361A	3000	–	0...80	0...75	0.1 + 20	0.3 + 80	15	60	■	◆	–	◆	Dyn.	■	■	■	■	■	
Standard equipment																				
SYSKON P1500-60-60	K353A	1500	–	0...60	0...60	0.05 + 30	0.05 + 90	6	50	■	■	■	◆	Dyn.	■	■	■	■	■	
SYSKON P3000-60-120	K363A	3000	–	0...60	0...120	0.07 + 48	0.10 + 135	10	70	■	■	■	◆	Dyn.	■	■	■	■	■	
SYSKON P4500-60-180	K364A	4500	–	0...60	0...180	0.10 + 48	0.15 + 180	15	100	■	■	■	◆	Dyn.	■	■	■	■	■	
MSP Plug-In Modules																				
ES 31 K 7 R 7 P	K372D	49	–	0...7	0...±7	0.05 + 4	0.1 + 4	1	3	–	–	–	–	Via basic instrument	■	–	–	■	■	–
ES 32 K 30 R 4 P	K373A	120	–	0...30	0...±4	0.05 + 16	0.1 + 2	3	3	–	–	–	–		■	–	–	■	■	–
ES 32 K 80 R 1.5 P	K373B	120	–	0...80	0...±1.5	0.05 + 40	0.1 + 1	3	2	–	–	–	–		■	–	–	■	■	–
ES 31 K 2x8 R 3 P	K372A	2x24	–	2x0...8	2x0...±3	0.05 + 4	0.1 + 2	1	3	–	–	–	–		■	–	–	■	■	–
ES 31 K 2x16 R 1.5 P	K372B	2x24	–	2x0...16	2x0...±1.5	0.05 + 8	0.1 + 1	1	2	–	–	–	–		■	–	–	■	■	–
ES 31 K 2x40 R 0.6 P	K372C	2x24	–	2x0...40	2x0...±0.6	0.05 + 20	0.1 + 0.5	3	2	–	–	–	–		■	–	–	■	■	–

■ Standard equipment ◆ Optional



Overview Continued Laboratory Power Supplies

Type	Article	Max. Power		Setting Range		Total System Error		Residual Ripple		SELV (safety extra-low voltage)	Analog Interface	Sink Mode	Surge protection	Auto-Ranging Output	Output On/Off	Front Panel Output	Rear Panel Output
		Duration [W]	< 90 s [W]	U_{set} [V]	I_{set} [A]	$U_{set} \pm (\% + mV)$	$I_{set} \pm (\% + mA)$	U [mV _{TRMS}]	I [mA _{TRMS}]								

Analog Controlled Laboratory Power Supplies

SLP 32 N 20 R 10	K220A	120	(200)	0 ... 20	0 ... 10	20	28	10	25	■	■	Dyn.	–	■	■	■	■
SLP 32 N 40 R 6	K221A	120	(240)	0 ... 40	0 ... 6	15	15	10	20	■	■	Dyn.	–	■	■	■	■
SLP 32 N 80 R 3	K222A	120	(240)	0 ... 80	0 ... 3	15	15	10	10	–	■	Dyn.	–	■	■	■	■
SLP 32 N 20 R 20	K230A	240	(320)	0 ... 20	0 ... 20	30	38	15	50	■	■	Dyn.	–	■	■	■	■
SLP 32 N 40 R 12	K231A	240	(360)	0 ... 40	0 ... 12	23	38	15	25	■	■	Dyn.	–	■	■	■	■
SLP 32 N 80 R 6	K232A	240	(360)	0 ... 80	0 ... 6	23	20	15	20	■	■	Dyn.	–	■	■	■	■
SLP 32 N 32 R 18	K234A	320	(430)	0 ... 32	0 ... 18	40	50	30	50	■	■	Dyn.	–	■	■	■	■

Type	Article	Power	Voltage	Current	Resistance	Interfaces			Mains Input
		P_{Set}	U_{Set}	I_{Set}	R_{Set}	RS 232	USB	IEEE 488	50 ... 60 Hz
		[W]	[V]	[A]	[Ω]				[V _{AC}]

Programmable Electronic Loads

SSL 32 EL 150 R 30	K850A	0.1 ... 150.0	0.001 ... 360.0	0.001 ... 30.00	0.01 ... 500.0	◆	◆	–	115/230
SSL 32 EL 300 R 30	K851A	0.1 ... 300.0	0.001 ... 360.0	0.001 ... 30.00	0.01 ... 500.0	◆	◆	–	115/230
SPL 250–30	K852A	0.001 ... 250.00	0.001 ... 80.000	0.0001 ... 30.000	0.0200 ... 2000	■	–	◆	115/230
SPL 400–40	K853A	0.001 ... 400.00	0.001 ... 80.000	0.0001 ... 40.000	0.0200 ... 2000	■	–	◆	115/230

KONSTANTER Accessories

Mounting Kit, 2 x 32N



Mains Jumper Cable



RS 232 Interface Cable



Interface Adapter



Type	Designation	Usable for	Article
K990A	Mounting kit 1 x 32N	SSP 32N, SLP 32N	K990A
K990B	Mounting kit 2 x 32N	SSP 32N, SLP 32N	K990B
K991A	Mains jumper cable, 0.4 m	SSP 32N	K991A
K991B	3-phase mains cable, 3 m, with 5-pole 16 A CEE plug	SSP 64N, SYSKON P3000/P4500	K991B
K931A	IEEE/IEEE bus cable, 2 m	SSP 32N, SSP 62N/64N, MSP 64D, SYSKON	K931A
Z3241	RS 232 interface cable, 2 m	SSP 32N, SSP 62N/64N, MSP 64D, SYSKON	GTZ3241000 R0001
K910A	Interface adapter, RS 232 / LSP, SSL	LSP 32K, SSL 32EL	K910A
K910B	Interface adapter, USB / LSP, SSL	LSP 32K, SSL 32EL	K910B