GOSSEN METRAWATT

Safety through Competence

SPL KONSTANTER
Programmable Electronic Load

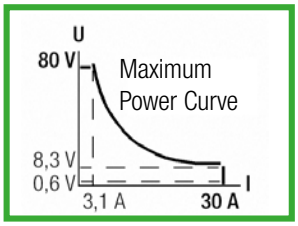
Programmable Electronic Load

Applications

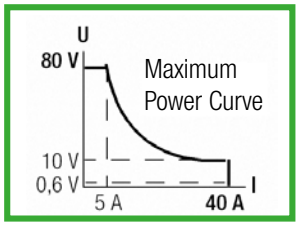
SPL electronic loads are high precision direct current sinks for use in research, product development, production, service and vocational training.

Four types are available with 200, 250, 350 and 400 W input power. The devices are distinguished by a diverse range of functions and excellent regulating accuracy, as well as outstanding ease of operation.

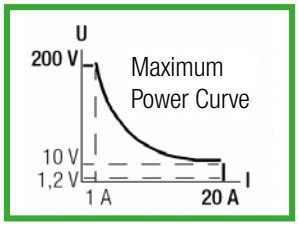
Nominal Input Data



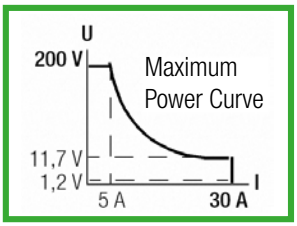
SPL 250-30



SPL 400-40

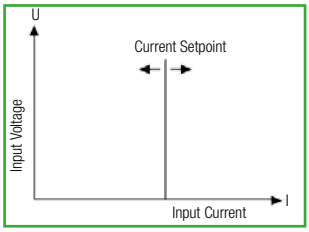


SPL 200-20

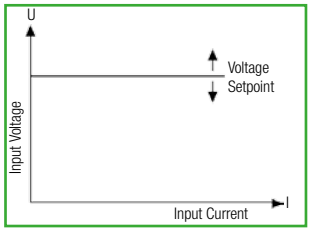


SPL 350-30

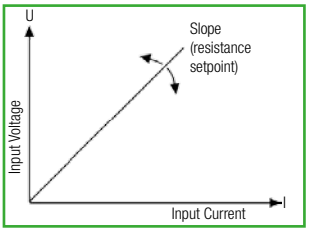
Operating Modes



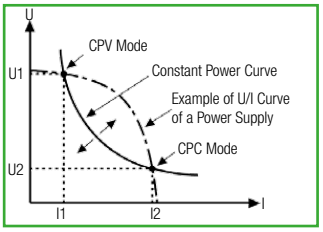
Constant Current



Constant Voltage



Constant Resistance



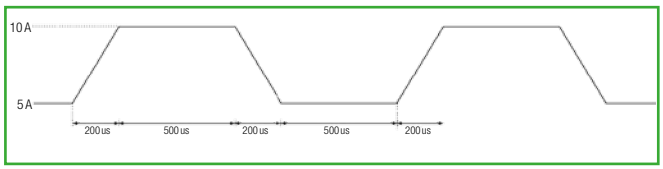
Constant Power

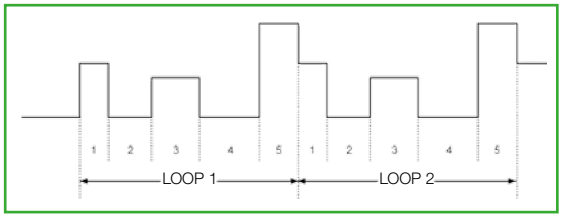
Highlights

- High speed sequence and transients programming
- Short-circuit proof, battery discharging and other auxiliary functions
- Minimum operating voltage is less than 0.6 V (80 V models) or 1.2 V (200 V models) at maximum current load
- Programmable current rise and fall time, steep edges
- Several groups of parameters (device settings) and sequences (load profile) can be saved and retrieved
- Floating power input / no grounding
- Safe electrical separation
- Power input can be switched on and off
- Adjustable power input activation point
- Voltage or current control is possible with constant power
- Settings selected by means of rotary switch and keypad
- Multifunctional LCD panel
- Safety functions, amongst others adjustable power limiting
- Benchtop instrument, also suitable for mounting to a 19" rack

Functions

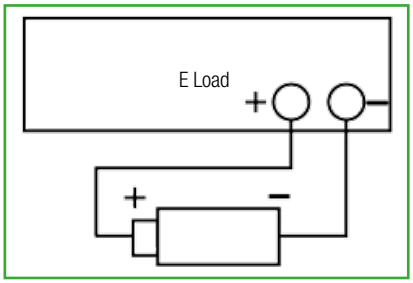
Rapid transient measurement of the connected device under test with separate adjustment options for high/low level, rise and fall time

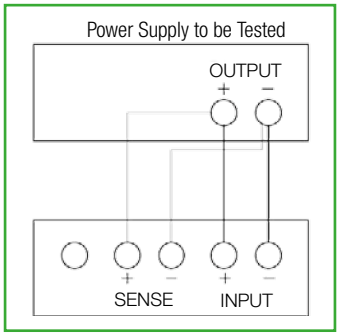




Extensive sequential test functions with 10 µs as the smallest step rate and 100,000 s as the largest step rate. Cyclical addresses can be freely selected and one sequence can be combined with another, in order to execute even more complex test procedures.

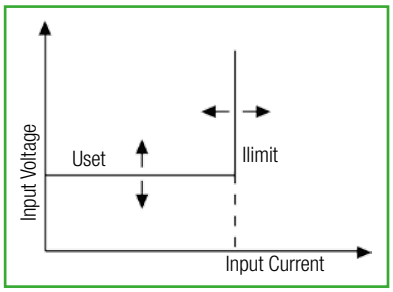
Short-circuit test, battery discharge test and other auxiliary functions

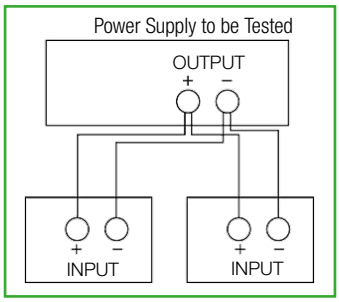




Remote sensor connector sockets and trigger connector socket are included. The instrument is automatically switched to sensing mode operation as soon as the remote sensors are connected.

10 groups of parameter settings can be saved to memory, and the default settings stored to RAM (location 0) are activated automatically when the instrument is switched on.





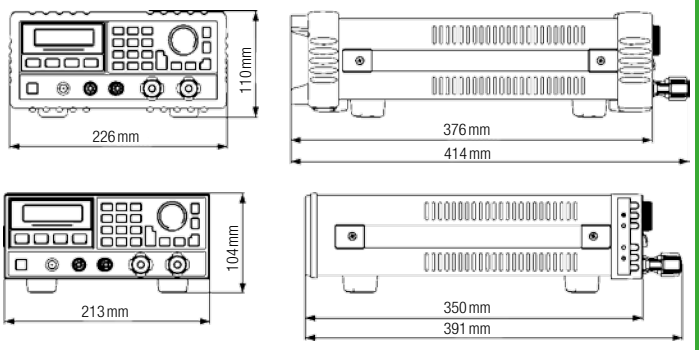
SCPI support makes it easy to set up an automatic test equipment system (ATE) which communicates with other programmable devices via the RS 232 port or the optional GPIB interface.

Views

Front Panel with Rubber Protector

Rear Panel with Rubber Protector and Optional GPIB interface

Dimensions



Input Terminals

Scope of Delivery

1 benchtop instrument
1 rubber protector
1 condensed operating instructions
1 CD ROM with operating instructions (German and English) plus SCPI programming guide (English)

Order Information

Description	Type	Article Number
Single-channel electronic load with multifunctional digital display, with characteristic current, resistance, power and voltage curves, benchtop instrument, suitable for mounting to a 19" rack		
Input: max. 80 V DC / max. 30 A / max. 250 W, supply power: 115/230 V AC, 50/60 Hz	KONSTANTER SPL 250-30	K852A
Input: max. 80 V DC / max. 40 A / max. 400 W, supply power: 115/230 V AC, 50/60 Hz	KONSTANTER SPL 400-40	K853A
Input: max. 200 V DC / max. 20 A / max. 200 W, supply power: 115/230 V AC, 50/60 Hz	KONSTANTER SPL 200-20	K854A
Input: max. 200 V DC / max. 30 A / max. 350 W, supply power: 115/230 V AC, 50/60 Hz	KONSTANTER SPL 350-30	K855A
GPIB IEEE488 interface – plug-in interface for SPL electronic load	IEEE488 interface	K890A

Characteristic Values

Type	SPL 250-30	SPL 400-40	SPL 200-20	SPL 350-30
Input Data				
Front panel input	1	1	1	1
Current	0 ... 30 A	0 ... 40 A	0 ... 20 A	0 ... 30 A
Voltage	0 ... 80 V	0 ... 80 V	0 ... 200 V	0 ... 200 V
Power	250 W at 40 °C	400 W at 40 °C	200 W at 40 °C	350 W at 40 °C
Constant Current Mode				
Resolution	As of 0.1 mA	As of 0.1 mA	As of 0.1 mA	As of 0.1 mA
Accuracy	As of 0.1% + 5 mA	As of 0.1% + 5 mA	As of 0.1% + 5 mA	As of 0.1% + 5 mA
Constant Voltage Mode				
Resolution	1 mV	1 mV	2 mV	2 mV
Accuracy	0.1 % + 10 mV	0.1 % + 10 mV	0.1 % + 25 mV	0.1 % + 25 mV
Constant Resistance Mode				
Resolution	As of 0.1 mΩ	As of 0.1 mΩ	As of 0.1 mΩ	As of 0.1 mΩ
Accuracy where I > 4	As of 0.5% + 12 mΩ	As of 0.5% + 12 mΩ	As of 0.5% + 40 mΩ	As of 0.5% + 40 mΩ
Constant Power Mode				
Resolution where P ≥ 100 W	10 mW	10 mW	10 mW	10 mW
Accuracy	0.2 % + 600 mW	0.2 % + 600 mW	0.2 % + 600 mW	0.2 % + 600 mW
Transient Mode				
Transient operating modes	Continuous, pulsed, switching	Continuous, pulsed, switching	Continuous, pulsed, switching	Continuous, pulsed, switching
Frequency range	0.38 Hz ... 50 kHz	0.38 Hz ... 50 kHz	0.38 Hz ... 50 kHz	0.38 Hz ... 50 kHz
List Data (sequence)				
Step time	10 µs to 100,000 s	10 µs to 100,000 s	10 µs to 100,000 s	10 µs to 100,000 s
Number of steps	1 … 50	1 … 50	1 … 50	1 … 50
Cycles	1 … 65535	1 … 65535	1 … 65535	1 … 65535
Memory capacity	7 lists	7 lists	7 lists	7 lists
Extended functions	Sequence	Sequence	Sequence	Sequence
Maximum Rise Speed				
Current	3 A / µs	4 A / µs	2 A / µs	3 A / µs
Voltage	0.6 V / µs	0.6 V / µs	0.6 V / µs	0.6 V / µs
Maximum Input Level				
Current	33 A	44 A	22 A	33 A
Voltage	84 V	84 V	210 V	210 V
Safety Functions	OV, OC, OP, OT, RV	OV, OC, OP, OT, RV	OV, OC, OP, OT, RV	OV, OC, OP, OT, RV
Residual Ripple and Noise				
Current (TRMS/peak-to-peak)	3 mA / 30 mA	3 mA / 30 mA	3 mA / 30 mA	3 mA / 30 mA
Voltage (TRMS)	5 mV	5 mV	12 mV	12 mV

GOSSEN METRAWATT

GMC-I Messtechnik GmbH
Südwestpark 15 ▪ 90449 Nürnberg ▪ Germany
Phone: +49 911 8602-111 ▪ Fax: +49 911 8602-777

www.gossenmetrawatt.com ▪ info@gossenmetrawatt.com

Printed in Germany. Subject to change without notice. 2/01.15 3-337-313-03