

DC POWER FOR THE TEST RIG AND THE LAB

HIGHLY RELIABLE
COMPUTER CONTROLLED
POWER SUPPLIES



LABKON P SERIES
DC POWER SUPPLIES

SAFE

- **OTP:** Overtemperature protection for the prevention of damage to the instrument
- **OVP:** Freely adjustable overvoltage protection for the prevention of damage to the instrument and the device under test
- **Safe electrical separation:** The power output is electrically isolated from the mains inlet
- **Auto-sensing:** Sensing sockets assure that the selected voltage value is applied to the device under test
- **Screw terminals:** Avoidance of contact with the power output

RELIABLE

- **Minimal residual ripple:** The narrow tolerances of the power output permit reproducible error simulation as well as repeatability or multiplication of test runs.
- **Suitable for continuous use:** The instrument series is laid out for continuous use with its rugged design and various control options. Long service lives can thus be simulated making it possible to test safety-relevant components.
- **Self-adjustment:** Adjustment function in the instrument for customer-defined check intervals on-site

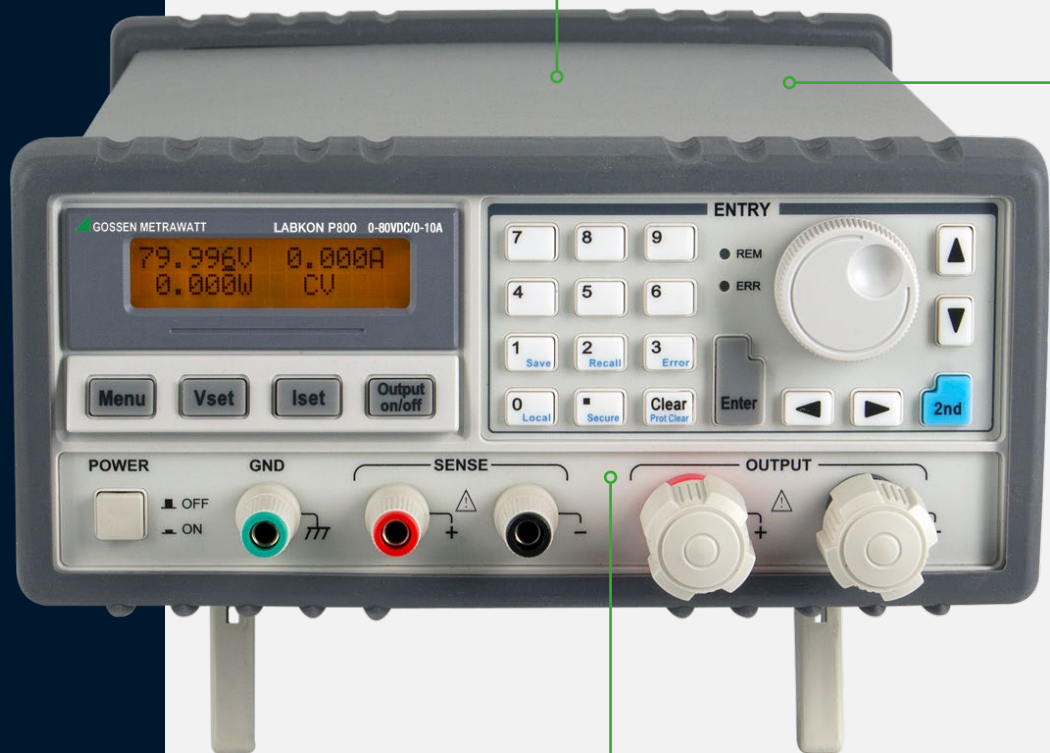
FLEXIBLE

- **Connection:** LABKON P series instruments can be connected in series and in parallel in order to increase nominal power / voltage/ current.
- **Control:** Regardless of whether manual - with the keypad or rotary encoder - or via one of the digital interfaces; the control options leave nothing to be desired – and the instruments are equipped with an SCPI command set as well.
- **Place of use:** All of the instrument's functions can be taken advantage of whether it's used on the laboratory bench or installed to a test rig.



DC power supplies with up to:

- 800 W nominal power
- 120 V nominal voltage
- 40 A nominal current



APPLICATIONS

ALWAYS ON THE SAFE SIDE WITH CLEAN SIGNALS

LABKON P series instruments are single-channel DC power supplies with a stable and precise power output.

The series combines modern circuit technologies, a diverse range of functions and absolute reliability.

The instruments can be ideally incorporated into applications which are required in R&D, production and in automated test systems.

They are an ideal, reliable solution for numerous applications at the industrial level, as well as for laboratory operations.

FEATURES

RELIABLE INSTRUMENTS FOR LABORATORY AND TEST APPLICATIONS

POWER OUTPUT

- Power: 500 W or 800 W
- Voltage up to 120 V, current up to 40 A
- CV and CC operating modes, automatic switching
- Floating power output / no grounding
- Highly efficient
- Safe electrical separation
- DC output can be switched on and off
- Protective functions including overvoltage protection and more
- Auto-sensing operation

CONTROL

- Settings entered via rotary encoder and keypad
- Output voltage and output current can be continuously regulated from 0 up to nominal value
- Multifunctional LCD panel
- Basic settings memory (10 locations)
- RS232 interface, optional GPIB and USB
- Supports SCPI (standard commands for programmable instruments)
- Calibration (adjustment) function

TEST ENVIRONMENT

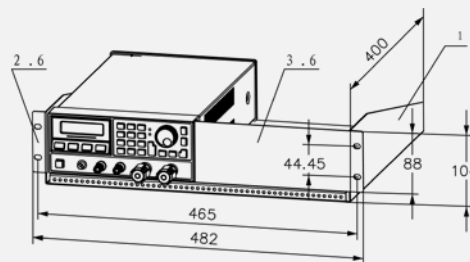
- Benchtop instrument, also suitable for mounting to a 19" rack
- Rugged and compact with simple handling
- Removable rubber holster
- Carrying handle

ACCESSORIES

REGARDLESS OF THE APPLICATION SETTING – YOU'RE ALWAYS READY WITH THE LABKON SERIES

INSTALLATION KIT

With the optionally available installation kit, one (½ 19") or two LABKON P series instruments can be installed to a test rig.



INTERFACES

In addition to the RS232 interface provided as standard equipment, optionally available IEEE 488 and USB interfaces can also be used for digital control.

CHARACTERISTIC VALUES

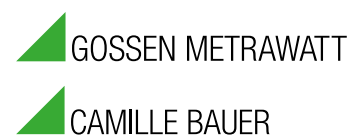
	LABKON P500 20V / 25A	LABKON P500 35V / 14.5A	LABKON P500 80V / 6.5A	LABKON P500 120V / 4.2A	LABKON P800 20V / 40A	LABKON P800 35V / 22.5A	LABKON P800 80V / 10A	LABKON P800 120V / 6.5A
Rated Output Values								
Voltage:	0 ... 20V	0 ... 35V	0 ... 80V	0 ... 120V	0 ... 20V	0 ... 35V	0 ... 80V	0 ... 120V
Current	0 ... 25A	0 ... 14.5A	0 ... 6.5A	0 ... 4.2A	0 ... 40A	0 ... 22.5A	0 ... 10A	0 ... 6.5A
Residual Ripple and Interference Emission (20 Hz to 20 MHz)								
Voltage (rms)	< 3mVrms	< 5 mV rms	< 8 mV rms	< 15mV rms	< 10mVrms	< 10 mV rms	< 16 mV rms	< 16 mV rms
Voltage (peak-to-peak)	< 25 mVp-p	< 10 mV p-p	< 14 mV p-p	< 80 mV p-p	< 25 mVp-p	< 20 mV p-p	< 25 mV p-p	< 80 mV p-p
Current (rms)	< 10 mArms	< 8 mA rms	< 6 mA rms	< 6 mA rms	< 20 mArms	< 10 mA rms	< 10 mA rms	< 10 mA rms
Common mode current	< 1.5 mArms	< 1.5 mA rms	< 1.5 mA rms	< 1.5 mA rms	< 1.5 mArms	< 1.5 mA rms	< 1.5 mA rms	< 1.5 mA rms
Load Correction (static)								
Voltage	3 mV	5 mV	10 mV	10 mV	5 mV	3 mV	3 mV	10 mV
Current	3 mA	3 mA	2 mA	1 mA	4 mA	2 mA	5 mA	2 mA
Mains Correction								
Voltage	5 mV	5 mV	10 mV	10 mV	2 mV	2 mV	2 mV	10 mV
Current	3 A	3 A	2 mA	1 mA	2 mA	1 A	2 mA	1 mA
Response Time at 0 ... 100% (measured: 10 ... 90%)								
Increase full load	50 ms	50 ms	50 ms	60 ms	50 ms	50 ms	50 ms	60 ms
Decrease full load	50 ms	50 ms	50 ms	60 ms	35 ms	50 ms	50 ms	60 ms
Increase idle	50 ms	50 ms	50 ms	60 ms	50 ms	50 ms	50 ms	60 ms
Decrease idle	200 ms	200 ms	300 ms	300 ms	150 ms	200 ms	300 ms	300 ms
Programming Accuracy								
Voltage	0.03% + 5 mV	0.15% + 5 mV	0.03% + 10 mV	0.03% + 15 mV	0.03% + 5 mV	0.03% + 8 mV	0.03% + 10 mV	0.03% + 15 mV
Current	0.50% + 8 mA	0.50% + 6 mA	0.50% + 3 mA	0.50% + 10 mA	0.50% + 15 mA	0.50% + 6 mA	0.50% + 5 mA	0.50% + 12 mA
Read-Back Accuracy								
Voltage	0.02% + 2 mV	0.15% + 5 mV	0.02% + 5 mV	0.02% + 8 mV	0.02% + 2 mV	0.02% + 2 mV	0.02% + 5 mV	0.02% + 8 mV
Current	0.20% + 8 mA	0.50% + 5 mA	0.50% + 5 mA	0.50% + 5 mA	0.20% + 5 mA	0.20% + 5 mA	0.50% + 5 mA	0.50% + 12 mA
Adjustable Resolution								
Voltage	1 mV	1 mV	1 mV	1 mV (@ 0 ... 99.999V) 10 mV (@ 100 ... 120V)	1 mV	1 mV	1 mV	1 mV (@ 0 ... 99.999 V) 10 mV (@ 100 ... 120 V)
Current	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA
Read-Back Resolution								
Voltage	1 mV	1 mV	1 mV	2 mV	1 mV	1 mV	1 mV	2 mV
Current	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA
Measuring Resolution								
Voltage	1 mV	1 mV	1 mV	1 mV (@ 0 ... 99.999 V) 10 mV (@ 100 ... 120 V)	1 mV	1 mV	2 mV	1 mV (@ 0 ... 99.999 V) 10 mV (@ 100 ... 120 V)
Current	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA

INSTRUMENTS AND ACCESSORIES

Description	Type	Article Number
LABKON P500 20V 25A laboratory Konstanter	LABKON P500 20/25	K147A
LABKON P500 35V 14.5A laboratory Konstanter	LABKON P500 35/14	K148A
LABKON P500 80V 6.5A laboratory Konstanter	LABKON P500 80/6	K149A
LABKON P500 120V 4.2A laboratory Konstanter	LABKON P500 120/4	K150A
LABKON P800 20V 40A laboratory Konstanter	LABKON P800 20/40	K157A
LABKON P800 35V 22.5A laboratory Konstanter	LABKON P800 35/22	K158A

Description	Type	Article Number
LABKON P800 80V 10A laboratory Konstanter	LABKON P800 80/10	K159A
LABKON P800 120V 6.5A laboratory Konstanter	LABKON P800 120/6	K160A
Optional IEEE 488 interface for LABKON series	IEEE 488 interface	K890A
Optional USB interface for LABKON series	USB interface	K891A
Installation kit for 19" rack mounting	SPL/LABKON installation set	Z990A

GMC INSTRUMENTS



GMC-I Messtechnik GmbH
Südwestpark 15 ▪ 90449 Nürnberg ▪ Germany
Phone: +49 911 8602-999 ▪ Fax: +49 911 8602-125

www.gossenmetrawatt.com ▪ export@gossenmetrawatt.com