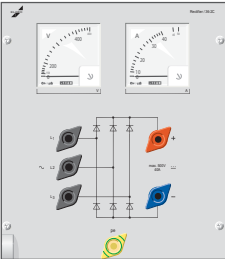
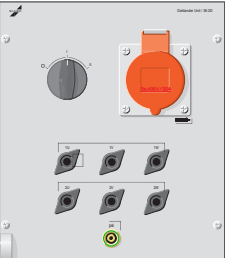
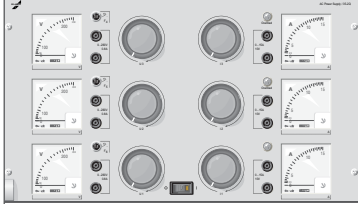





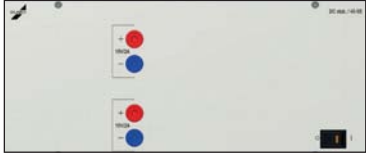

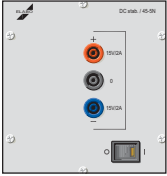

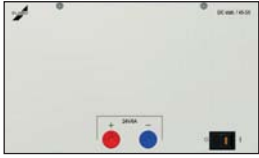
If a fixed or an adjustable direct current is required for testing, then an additional insert for direct current supply can be utilised here. This insert is fed from the laboratory terminals U1 - V1 - W1 of the testing insert 36-2A or 36-3A in conjunction with the utilisation of a 3-phase ring core variable transformer. In addition to the function of supplying direct current, extensive testing can also be implemented with this configuration.

	Technical data	Order no.	
Rectifier insert 6HU / 2WU	Insert with rectifier in DB(B6) switching. Input: 3 x 0...400V AC / 50Hz Output: 0...500V / 25A DC 1 moving coil voltmeter 0...500V 1 moving coil ammeter 0...25A Ripple of the direct current: approx. 5% with 3-phase current connection approx. 48% with alternating current connection 3 screw-type terminals 63A for feeding the alternating current voltage with 4mm plug-in option 2 screw-type terminals 63A for drawing the direct current with 4mm plug-in option 1 PE-screw-type terminal	36-2B	
Rectifier insert 6HU / 2WU		Insert with rectifier in DB(B6) switching. Input: 3 / N / PE 0...400V AC / 50Hz Output: 0...500V / 40A DC Moving coil voltmeter 0...500V Moving coil ammeter 0...40A Ripple of the direct current: approx. 5% with 3-phase current connection approx. 48% with alternating current connection 3 screw-type terminals 63A for feeding the alternating current voltage with 4mm plug-in option 2 screw-type terminals 63A for drawing the direct current with 4mm plug-in option 1 PE-screw-type terminal	36-2C
Pole reverser 6HU / 2WU		Insert with 1 Dahlander pole reverser 40A 6 screw-type terminals 63A, aligned like a terminal board aligned with 4mm plug-in option 1 CEE socket 5-pin 32A 1 PE screw-type terminal The insert is pre-wired with the test rooms 36-2A or 36-3A.	36-2D
Voltage and current transmitter 3-phase 6HU / 4WU		Insert with floating, 3-phase voltage and current transmitter for application in the area of EVU workshops. The insert is used not only for checking voltage and current relays, but also overvoltage, overcurrent and bimetallic relays. Floating current transmitter 3 variable transformers with downstream current transformers Current setting range: 0...15A No-load voltage: 0...10V 3x 2 laboratory safety sockets, designated I1, I2, I3 3 ammeters 0...15A (moving armature instruments, class 1.5) 3 overcurrent displays Floating voltage transmitter 3 variable transformers Secondary voltage: 0...260V Load current: maximum 0.8A 3 thermal magnetic circuit breakers for fusing on the secondary side 3x 2 laboratory safety sockets, designated U1, U2, U3 3 voltmeters 0...300V (moving armature instruments, class 1.5) 1 illuminated rocker switch	35-2Q

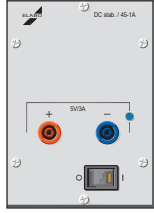
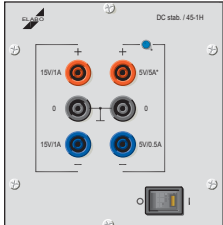
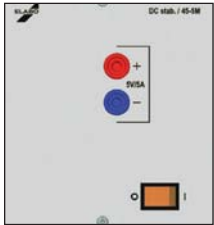
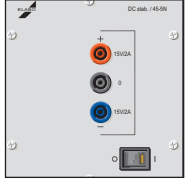
8.6 DC-stabiliser fixed

DC-stabiliser

Elabo offers a wide array of products, not only in testing devices and meters but also in power supply systems.

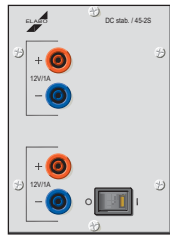
		Technical data	Order no.
<p>Regulated DC-stabiliser 3HU / 36HP</p> 		<p>Insert plate with linearly regulated stabiliser 5V / 3A with</p> <ol style="list-style-type: none"> 1 illuminated rocker switch 2 laboratory safety sockets 	45-5R
<p>Regulated DC-stabiliser 3HU / 60HP</p> 		<p>Insert plate with linearly regulated DC-stabiliser 2 x 15V / 2A</p> <p>switchable either parallel or in series</p> <ol style="list-style-type: none"> 1 illuminated rocker switch 4 laboratory safety sockets 	45-5S
<p>Regulated DC-stabiliser 3HU / 24HP</p> 		<p>Insert plate with DC-stabiliser with pulsed output voltages $\pm 15V / 2A$</p> <p>Outputs guided to 3 laboratory safety sockets</p> <p>Output power: 2 x 30W</p> <p>Ripple: 120mVp-p</p> <p>Output tolerance: $\pm 1.0\%$</p> <p>Input control: $\pm 0.5\%$</p> <p>Load control: $\pm 0.5\%$ overload protection</p>	45-5N
<p>Regulated DC-stabiliser 3HU / 42HP</p> 		<p>Insert plate with pulsed output voltage 24V / 6A</p> <p>Outputs guided to 2 laboratory safety sockets</p> <p>Output power: 150W</p> <p>Ripple: 150mVp-p</p> <p>Output tolerance: $\pm 1.0\%$</p> <p>Input control: $\pm 0.5\%$</p> <p>Load control: $\pm 0.5\%$ overload protection</p>	45-5X

DC fixed voltage stabiliser with stabilised direct current in current-limited and voltage-limited design. Stabilisers for supplying logic circuits, microprocessors and periphery modules contain up to four different sources. The outputs are galvanically separated from one another and floating.

	Technical Data	Order no.								
<p>DC-stabiliser 3HU / 18HP</p> 	<p>Eurocassette with DC fixed voltage stabiliser</p> <p>Ripple of the output voltage: < 5mV</p> <p>Recovery time: 100µs</p> <p>Load recovery: 0.1%</p> <p>Temperature coefficient: 0.01%/°C</p> <p>2 laboratory safety sockets</p> <p>1 illuminated rocker switch</p> <p>Voltage / current</p> <p>5V / 3A</p> <p>15V / 1.5A</p> <p>24V / 3A (24HP)</p>	<p>45-1A</p> <p>45-1B</p> <p>45-2M</p>								
<p>DC-stabiliser 3HU / 18HP</p>	<p>Eurocassette with DC fixed voltage stabiliser</p> <p>Voltage / current</p> <p>5V / 12A</p> <p>Primary switching regulator with mains interference filter</p>	<p>45-2J</p>								
<p>DC-stabiliser for microprocessors 3HU / 24HP</p> 	<p>Eurocassette with DC-stabiliser for generating all of the voltages required for microprocessors and periphery modules:</p> <p>All supplies are equipped with a permanently fixed current limitation and overvoltage protection (OVP).</p> <p>Ripple of the output voltage: < 20mV</p> <p>Recovery time: approx. 100µs</p> <p>6 laboratory safety sockets</p> <p>1 illuminated rocker switch</p> <p>1: +5V / 5A, floating, galvanically separated from outputs 3 and 4</p> <p>2: -5V / 0.5A, floating</p> <p>3: +12V / 1A, floating</p> <p>4: -12V / 1A, floating</p>	<p>45-1G</p>								
	<p>as with type 45-1G, but with voltage / current</p> <p>1: +5V / 5A, floating, galvanically separated from outputs 3 and 4</p> <p>2: -5V / 0.5A, floating</p> <p>3: +15V / 1A, floating</p> <p>4: -15V / 1A, floating</p>	<p>45-1H</p>								
<p>DC-stabiliser 3HU / 24HP</p>  	<p>DC-stabiliser in switching regulator design</p> <p>Recovery time: maximum 500µs</p> <p>2-3 laboratory safety sockets</p> <p>1 illuminated rocker switch</p> <table border="0"> <tr> <td>Voltage / current</td> <td>Ripple</td> </tr> <tr> <td>5V / 5A</td> <td>80mVp-p</td> </tr> <tr> <td>+/- 15V / 2A</td> <td>120mVp-p</td> </tr> <tr> <td>24V / 6A</td> <td>150mVp-p</td> </tr> </table> <p>Note: Could not be installed into the 3HU power supply duct.</p>	Voltage / current	Ripple	5V / 5A	80mVp-p	+/- 15V / 2A	120mVp-p	24V / 6A	150mVp-p	<p>45-5M</p> <p>45-5N</p> <p>45-5P</p>
Voltage / current	Ripple									
5V / 5A	80mVp-p									
+/- 15V / 2A	120mVp-p									
24V / 6A	150mVp-p									

DC-stabiliser

Dual stabiliser
3HU / 18HP



Technical data

Order no.

Eurocassette with dual stabiliser

Recovery mains: < 0.12%

Recovery load

(no load/full load): < 0.9%

Ripple: < 1mV_{eff}
< 5.0mV_{ss}

Recovery time: max. 50µs, measured with a modulation between 20 and 100% at 1kHz and recovery within 0.1% U_N

Temperature coefficient: < ± 150ppm / K

4 laboratory safety sockets

1 illuminated rocker switch

Direct voltage	Direct current
----------------	----------------

2 x 12V	2 x 1.0A
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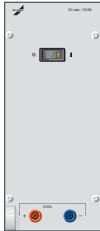
2 x 15V	2 x 1.0A
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45-2S

45-2T

Regulated DC-stabiliser



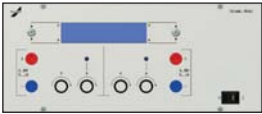

DC-stabiliser with stabilised direct current in voltage-limited and current-limited design. The floating outputs are short circuit-proof and can be switched both in series and parallel.

	Technical Data	Order no.
<p>Regulated DC-stabiliser 6HU / 1WU</p> 	<p>Insert plate for supplying with stabilised direct currents $\pm 15V / 1A$ and $5V / 3A$ galvanically isolated and short circuit-proof</p> <p>Ripple: $< 5mV_{eff} < 15mV_{ss}$ Load regulation: $< 50mV$ (no load/full load) Recovery time: typically $50\mu s$, max. $100\mu s$ Temperature coefficient of the output voltages: $150ppm / K$</p> <p>1 illuminated rocker switch 5 laboratory safety sockets for drawing the direct currents</p>	<p>32-1D</p>
<p>Eco-regulated DC-stabiliser 6HU / 1WU</p> 	<p>Fixed stabiliser in inexpensive switching regulator design Recovery time: max. $500\mu s$ 1 illuminated rocker switch</p> <p>5V / 5A Ripple: $80mV_{eff}$ Load regulation: $\pm 1\%$ Temperature coefficient: $0.03\%/^{\circ}C$ Operating voltage: 88-264V AC 2 laboratory safety sockets</p> <p>$\pm 15V / 2 \times 2A$ Ripple: $2 \times 120mV_{eff}$ Load regulation: $\pm 0.5\%$ Temperature coefficient: $0.03\%/^{\circ}C$ Operating voltage: 88-264 V AC 3 laboratory safety sockets</p> <p>24V / 6A Ripple: $150mV_{eff}$ Load regulation: $\pm 0.5\%$ Temperature coefficient: $0.05\%/^{\circ}C$ Operating voltage: 85-264V AC 2 Laboratory safety sockets</p>	<p>32-5M</p> <p>32-5N</p> <p>32-5P</p>

8.7 DC-stabiliser adjustable

Insert plate DC-stabiliser

Elabo offers a wide array of products, not only in testing devices and meters but also in power supply systems.

		Technical Data	Order no.
Adjustable DC-stabiliser 3HU / 60HP		Insert plate with DC-stabiliser 0...30V / 0...1.5A 1 digital display V/A switch-selected 2 10-turn potentiometers	45-5F
Adjustable DC-stabiliser 3HU / 84HP		Insert plate with DC-stabiliser 0...30V / 0...3A 2 digital displays 2 10-turn potentiometers	45-5G
Adjustable DC-stabiliser 3HU / 60HP		Insert plate with DC-stabiliser 2 x 0...30V / 0...1A 2 voltmeter and ammeter, digital 2 x 2 10-turn potentiometers	45-5U
Adjustable DC-stabiliser 3HU / 84HP		Insert plate with DC-stabiliser 2 x 0...30V / 0...2A 2 digital display, switch-selected 2 presets for voltage limitation and current limitation Voltage and current are continuously adjustable 2 x 2 10-turn potentiometers 1 rocker pushbutton switch for output on/off	45-5U Z801



Smart DC Lab Power Supply Systems

with arbitrary function



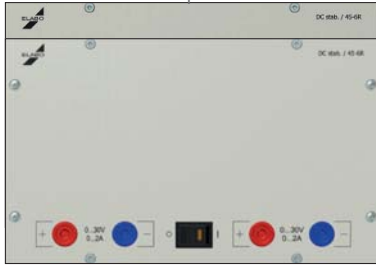
Highlights

- Master-slave operation
- Parallel operation (0–4A)
- Serial operation (0–60V)
- Tracking operation ($\pm 30V$)
- Predefined curve progressions for sine, square, triangle, sawtooth, PWM
- Arbitrary function for free programming of voltage and current progressions
- Output limitation, password-protected
- Predefinable power-ON values
- Ethernet and USB interfaces
- Integrated web server for simple remote control via web browser
- 1 or 2 channels

Smart DC Lab Power Supply Systems

with arbitrary function

3 control concepts



Automatic version



Rotary switch version



Touch version

Operating modes

The different operating modes of dual-output power supply units offer the option to control the output voltage of Part 2 as a function (0–100%) of Part 1 while complying with all control characteristics. Output voltage in serial and parallel operation is drawn from the left channel.

- Master-slave operation
Both power modules are electrically isolated from one another, but are controlled together.
- Parallel operation
Both power modules are connected internally in parallel, so that the double output current can be drawn from the output terminals of power module 1
- Serial operation
Both power modules are connected internally in series. The double output voltage can be drawn from the respective external terminals.
- Tracking operation
Both power modules are connected internally in series, so that, with reference to the two terminals in the middle, plus (+30V) or minus (–30V) voltage can be drawn.

Power supply unit with measuring function

Elabo power supply units, in addition to supplying power, are also perfectly suited for the accurate measurement of actual values. Current and voltage values are measured at intervals of 50 ms and can be read out on the interface of the device.

Device limitation

Output voltage and output current can be limited via remote control or also in local mode. This is particularly useful in a training environment or for protecting sensitive components. Such settings are password-protected.

Smart DC Lab Power Supply Systems

with arbitrary function

Arbitrary function

The lab power supply units have an arbitrary function that makes it possible to program and execute pre-determined functions or freely definable voltage and power curves.

The following functions can be selected:

- Sine
- Square
- Triangle
- Sawtooth
- PWM

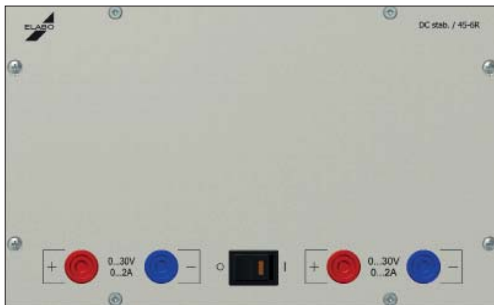


The freely programmable mode makes it possible to program up to 6 curves each with 99 support points. In this mode, one always presets the start value and end value for current and voltage, and also the duration. In the automatic and rotary switch versions, the arbitrary function can be used only via the interface.

Power class	120W	120W	300W	600W
Feature				
Channel	2	2	1	1
Voltage	2x0...30V	2x0...30V	0...30V	0...60V
Current	2x0...2A	2x0...2A	0...10A	0...10A
Size	3HU / 42HP	6HU / 2WU	3HU / 66HP	6HU / 2WU
Version:				
Automatic	45-6R	–	45-6G	–
Digital	45-7R	34-7T	45-7G	34-7L
Touch	45-8R	34-8T	45-8G	34-8L

Smart DC Lab Power Supply System

2x0...30V / 0...2A / 120W



45-6R.3



45-7R.3



45-8R.3



A3-5S.3

Highlights

- 4 operating modes for master-slave operation/dual output voltage (0–60V)/dual output current (0–4A)/ symmetrical voltage supply ($\pm 30V$)
- Output limitation, password-protected
- Predefinable power-ON values
- Direct and remote control operation in parallel possible
- Interference voltage protection
- Ethernet and USB interfaces
- Integrated web server
- Arbitrary function

Scope of delivery

45-xR.3 Cassette 3HE / 42HP

Accessories:

83-5B ZBL Safety test lead, blue, 100mm

83-5B ZRT Safety test lead, red, 100mm

Smart DC Lab Power Supply System

2x0...30V / 0...2A / 120W

Recommended additional products:

N2-1A Elabo software package Elution® Device

N2-5A Elution® device driver for Smart DC

Voltage	
Output voltage	2x0...30V
Adjusting resolution	10mV
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Residual ripple	typ. 0,75mV _{eff} max. 1mV _{eff}
Current	
Output current	2x2A
Adjusting resolution	10mA
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Arbitrary function	
Number of support points	6x99 support points
Structure of support points	Start/stop voltage, start/stop current, time
Predefined curves for	Sine, triangle, square, sawtooth and more (up to 10Hz)
Operation	Rotary switch version, automatic version: via interface/Elution® software, Touch version: via display
General information	
Stability over 8 hours	0.3%
Adjusting resolution	12bit
Protection	Short circuit-proof, thermal overload protection, interference voltage protection
Output insulation	Ungrounded and isolated ± 250 V to ground
Humidity	25–75% rel. humidity
Operating temperature range	0...50°C
Line voltage	230V ± 10%, 49–61Hz
Display	Rotary switch version 2x two-line LCD, blue Touch operation 4.3" x 128 pixels, blue
Interface	Ethernet and USB, RS232 alternative to USB
Degree of protection	Protection class I (EN61010-1)
Power consumption	140W
Cassette dimensions	W = 213.3mm, D = 196.0mm, H = 128.5mm
Weight	5.3kg

Smart DC Laboratory Power Supply System

2x0...30V / 0...2A / 120W



34-7T.3



34-8T.3

Highlights

- 4 operating modes for master-slave operation/dual output voltage (0–60V)/dual output current (0–4A)/ symmetrical voltage supply ($\pm 30V$)
- Output limitation, password-protected
- Predefinable power-ON values
- Direct and remote control operation in parallel possible
- Interference voltage protection
- Ethernet and USB interfaces
- Integrated web server
- Arbitrary function

Scope of delivery

34-xT.3 Plug-in module 6HU / 2WU

Accessories:

- 83-5B ZBL safety test lead, blue, 100mm
- 83-5B ZRT Safety test lead, red, 100mm

Smart DC Laboratory Power Supply System

2x0...30V / 0...2A / 120W

Recommended additional products:

N2-1A Elabo software package Elution® Device
 N2-5A Elution® device driver for Smart DC

Voltage	
Output voltage	2x0...30V
Adjusting resolution	10mV
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Residual ripple	typ. 0.75 mV _{eff} max. 1mV _{eff}
Current	
Output current	2x2A
Adjusting resolution	10mA
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Arbitrary function	
Number of support points	6x99 support points
Structure of support points	Start/stop voltage, start/stop current, time
Predefined curves for	Sine, triangle, square, sawtooth and more (up to 10Hz)
Operation	Rotary switch version via interface/Elution® software, Touch version: via display
General information	
Stability over 8 hours	0.3%
Adjusting resolution	12bit
Protection	Short circuit-proof, thermal overload protection, interference voltage protection
Output insulation	Ungrounded and isolated ± 250 V to ground
Humidity	25–75% rel. humidity
Operating temperature range	0...50°C
Line voltage	230V ± 10%, 49–61Hz
Display	Rotary switch version 2x two-line LCD, blue Touch operation 4.3" x 128 pixels, blue
Interface	Ethernet and USB, RS232 alternative to USB
Degree of protection	Protection class I (EN61010-1)
Power consumption	140W
Cassette dimensions	W = 229mm, D = 260mm, H = 266mm
Weight	5.5kg

Smart DC Laboratory Power Supply System

0...30V / 0...10A / 300W



45-6G.3



45-7G.3



45-8G.3

Highlights

- Output limitation, password-protected
- Display for voltage, current and power
- Predefinable power-ON values
- Direct and remote control operation in parallel possible
- Interference voltage protection
- Ethernet and USB interfaces
- Integrated web server
- Arbitrary function

Scope of delivery

45-xG.3 Cassette 3HU / 66HP

Accessories:

83-5B ZBL Safety test lead, blue, 100mm

83-5B ZRT Safety test lead, red, 100mm

Smart DC Laboratory Power Supply System

0...30V / 0...10A / 300W

Recommended additional products:

N2-1A Elabo software package Elution® Device

N2-5A Elution® device driver for Smart DC

Voltage	
Output voltage	0...30V
Adjusting resolution	10mV
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Residual ripple	<2mV _{eff}
Current	
Output current	0...10A
Adjusting resolution	10mA
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Residual ripple	< 1mA _{eff}
Arbitrary function	
Number of support points	6x99 support points
Structure of support points	Start/stop voltage, start/stop current, time
Predefined curves for	Sine, triangle, square, sawtooth and more (up to 10Hz)
Operation	Rotary switch version, automatic version: via interface/Elution® software, Touch version: via display
General information	
Stability over 8 hours	0,3%
Adjusting resolution	12bit
Protection	Short circuit-proof, thermal overload protection, interference voltage protection
Output insulation	Ungrounded and isolated ± 250V to ground
Humidity	25–75% relative humidity
Operating temperature range	0...50°C
Line voltage	230V ± 10%, 49–61Hz
Display	Rotary switch version 2x two-line LCD, blue Touch operation 4.3" x 128 pixels, blue
Interface	Ethernet and USB, RS232 alternative to USB
Degree of protection	Protection class I (EN61010-1)
Power consumption	345W
Cassette dimensions	W =334.8mm, D =196.0mm, H =128.5mm
Weight	12.7kg

Smart DC Laboratory Power Supply System

0...30V / 0...10A / 300W



34-7L.3



34-8L.3

Highlights

- Output limitation, password-protected
- Display for voltage, current and power
- Predefinable power-ON values
- Direct and remote control operation in parallel possible
- Interference voltage protection
- Ethernet and USB interfaces
- Integrated web server
- Arbitrary function

Scope of delivery

34-xL.3 Slide-in module 6HU / 2WU

Accessories:

83-5B ZBL Safety test lead, blue, 100mm

83-5B ZRT Safety test lead, red, 100mm

Smart DC Laboratory Power Supply System

0...60V / 0...10A / 600W

Recommended additional products:

N2-1A Elabo software package Elution® Device
 N2-5A Elution® device driver for Smart DC

Voltage	
Output voltage	0...60V
Adjusting resolution	10mV
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Residual ripple	<2mV _{eff}
Current	
Output current	0...10A
Adjusting resolution	10mA
Adjusting precision	± 3 digits (typ. ± 2 digits)
Measuring accuracy	0.15% (display ± 3 digits)
Residual ripple	< 1mA _{eff}
Arbitrary function	
Number of support points	6x99 support points
Structure of support points	Start/stop voltage, start/stop current, time
Predefined curves for	Sine, triangle, square, sawtooth and more (up to 10Hz)
Operation	Rotary switch version: via interface/Elution® software Touch version: via display
General information	
Stability over 8 hours	0,3%
Adjusting resolution	12bit
Protection	Short circuit-proof, thermal overload protection, interference voltage protection
Output insulation	Ungrounded and isolated ± 250V to ground
Humidity	25–75% rel. humidity
Operating temperature range	0...50°C
Line voltage	230V ± 10%, 49–61Hz
Display	Rotary switch version 2x two-line LCD, blue Touch operation 4.3" x 128 pixels, blue
Interface	Ethernet and USB, RS232 alternative to USB
Degree of protection	Protection class I (EN61010-1)
Power consumption	690W
Cassette dimensions	W = 229mm, D = 260mm, H = 266mm
Weight	19.3kg