

Voltage Testers, Cable Detection System

Voltage Testers

2-Pole Voltage Meters and Multiple Measuring Instruments with Analog or Digital Display

ProfiSafe 1



METRAVOLT 5



METRAVOLT 12D

These 2-pole voltage meters and multiple measuring instruments fulfill requirements for voltage testers per DIN EN 61243-3 / VDE 682, part 401 (previously DIN VDE 0680, part 5).

- Easy to operate, VDE GS approved
- Measuring category III devices, double indication reliability with LEDs

ProfiSafe 1

This voltage, phase, continuity and polarity tester plus phase sequence indicator has been equipped with a long-life, rechargeable lithium battery for the display of continuity and phase test results. The battery is continuously recharged with a high performance solar cell, even with minimal ambient light. This maintenance-free voltage source assures long service life and reliable operation.

- 9 LEDs for the display of voltage, continuity, phase and direction of rotation
- Phase testing, display of direction of rotation and continuity testing
- Rugged housing, hazard-free use even under damp conditions, IP 65 protection

METRAVOLT 5

- LED indicates dangerous contact voltages as of 50 V
- Phase and direction of rotation indicated with LED, single pole voltage testing
- Rugged housing, hazard-free use even under damp conditions, IP 65 protection
- Insulation mark (manufactured per DIN 48699), class 2.5

METRAVOLT 12D

- Fully automated measuring sequence, self-test, measurement value storage, battery saving circuit
- Rugged housing, hazard-free use even under damp conditions, IP 65 protection
- Inherent error: 0.5% of reading + 1 digit

Type	ProfiSafe 1	METRAVOLT 5	METRAVOLT 12D
Complies with DIN VDE 0680	●	●	●
Voltage	12 ... 690 V \approx	50 ... 500 V \approx	0 ... 1200 V \approx
Dielectric strength	> 5 kV (1.2 / 50 μ s pulse wave)	> 10 kV (1.2 / 50 μ s pulse wave)	
Test voltage	5 kV	5 kV (routine test)	
Phase testing	●	●	●
Phase sequence indicator	●	●	●
Resistance	–	–	0 ... 750 k Ω
Continuity test	●	–	●
Frequency range	0 ... 2000 Hz	0 ... 100 Hz	15 ... 10,000 Hz
Power supply	Lithium battery + solar cell	–	9 V flat cell battery, IEC 6F 22
Battery test	–	–	●
Dimensions	50 x 230 x 35 mm + 1 m cable	78 x 285 x 48 mm	60 x 240 x 40 mm
Weight	0.17 kg	0.43 kg	0.29 kg (with battery)

Type	Data Sheet No.	Article Number		
ProfiSafe 1	–	M630B		
METRAVOLT 5	–	GTM525000R0001		
METRAVOLT 12D	3-349-201-03	M630C		

CableCop 300

Cable Detection System for Current and Voltage-Free Cables, and Current and Voltage Conducting Cables

Current and voltage-free, as well as current and voltage conducting cables in electrical circuits with up to 300 V can be pinpointed with the cable detection system. Cables and conductors, electrical circuits, short-circuits and earth faults can be located, and protective conduits and coaxial cable can be traced as well without interrupting power or shutting down sensitive electronic components. Detection is possible in walls and concrete, as well as underground.



Voltage range	9 ... 300 V \approx
Measuring frequency	32,768 kHz
Display / signal	LED / buzzer
Typical applications	Location of cables, switches, short-circuits and earth faults Tracing of protective conduits and coaxial cables
Range of applications	Walls, ground, concrete
Standard equipment	Case with T320 transmitter, S330 signal generator, R300 receiver, two 9 V batteries, 2 measurement cables, 2 alligator clips, 2 test probes, operating instructions
Dimensions / weight	310 x 200 x 85 mm / case and contents: approx. 1.95 kg

Type	Data Sheet No.	Article Number		
CableCop 300	–	GTM5292000R0001		

METRACLIP® 50 ... 71

Clip-On Meters with Analog or Digital Display for Service Technicians

Current within conductors can be conveniently measured with clip-on meters. The following advantages result:

- The electrical circuit need not be interrupted, no electrical connection to the conductor (safety isolation)
- Measurement of current to 3000 A, electrical safety per IEC 61010

METRACLIP 50/51: measured value memory with mechanically (METRACLIP 50) or electrically arrested pointer (METRACLIP 51)

METRACLIP 60: 3¼-place digital display, automatic measuring range selection, data HOLD and Max-Min display

METRACLIP 61: 4½-place digital display, automatic or manual measuring range selection, data HOLD and Max-Min display

METRACLIP 70: 4½-place digital display, automatic or manual measuring range selection, data HOLD and Max-Min display

METRACLIP 71: Three 4½-place digital displays with background illumination, data HOLD and Max-Min display

Type	Data Sheet No.	Article Number		
METRACLIP 50	3-349-049-03	M300A		
METRACLIP 51	3-349-049-03	M300B		
METRACLIP 60	3-348-983-03	M311C		
METRACLIP 61	3-348-983-03	M311D		
METRACLIP 70	3-349-064-03	M312A		
METRACLIP 71	3-349-061-03	M312B		



Type	METRACLIP 50	METRACLIP 51	METRACLIP 60	METRACLIP 61	METRACLIP 70	METRACLIP 71
Clip opening	28 mm dia. / 30x20 mm	60 mm dia. / 70x30 mm	Max. 24 mm dia.	40 mm dia.	42 dia./25x25/50x5 mm	50 mm dia. / 80x5 mm
Measuring category Vmax	III/600V, IV/300V	III/1 kV, IV/600 V	III	III/300 V, II/600 V	III/600 V	III / 600 V
Display	Analog	Analog	Digital	Digital	Digital (4000 digits)	triple (3 x 10,000 pixels)
Resolution			0.01/0.1 A	0.01 mA/0.01 A	4½-place	4½-place
Current	1.5 ... 300 A/AC	15 A...3000 A/AC	400 A/AC	0...300 A/AC (4 ranges)	0.2...400...1000 A RMS/AC, 0.2...400...1400 A/DC	1500 A _{SS} AC
Voltage	150 V ... 600 VAC	150 V ... 600 VAC	600 V/AC	–	0.4...600V DC / AC	1500 V _{SS} DC
Frequency range for U/I	48...52/40...100/40...400 Hz	40...60/40...100/40...400 Hz	I: 50...60 Hz U: 50...400 Hz	50 ... 60 Hz	45...450 Hz	10 Hz ... 5 kHz
Memory	–	HOLD function	Min-Max	DATA HOLD	Min-Max 500 ms	Min-Max 30 Hz
Frequency measurement	–	–	–	–	3 ranges: 100 Hz...4 kHz	0.5 Hz...20 kHz
Harmonic analysis	–	–	–	–	–	Distortion: CF, THD, DF
Continuity / buzzer	–	–	●	–	Ω/diode (acoustic)	–
Resistance	–	–	400 ... 4000 Ω	–	5 ranges: 0.5 Ω ... 4 MΩ	–
Phase sequence	–	–	–	–	–	–
Active power	–	–	–	–	–	10 W... 600 kW
Apparent power	–	–	–	–	–	10 VA... 600 kVA
Reactive power	–	–	–	–	–	10 var... 600 kvar
Power factor	–	–	–	–	–	0 ... 1
Energy	–	–	–	–	–	–
Sampling rate	–	–	2.5/sec.	2/sec. (bar graph: 12/sec.)	(2.5/sec.)	4 kHz
Interface	–	–	–	–	–	–
Accuracy	class 2.5	class 2.5	I: ±(2% + 7 d) U: ±(1% + 5 d)	30/300 mA: ±2% rdg. ±5 d 30/300A: -3/-5% rdg. ±5 d	1% (typ.)	U = 1% / I/P = 2% (typ.)
Power supply	–	3 V, 850 mA/4H	2 ea. IEC 6 LR03 (AAA)	2 x LR44/SR44	9 V, IEC 6 LR61	4 x IEC LR6 (AA mignon)
Dimensions / weight with bat.	88 x 220 x 40 mm / 0.5 kg	112 x 313 x 60 mm / 0.9 kg	69 x 191 x 33 mm / 0.22 kg	64 x 176 x 23 mm / 0.6 kg	97 x 254 x 46 mm / 0.6 kg	103 x 275 x 50 mm / 0.67 kg

Clip-On Meters

METRACLIP® 72 ... 81

Clip-On Meters with Analog or Digital Display for Service Technicians

METRACLIP 72 Power: handy, digital, RMS clip-on meter to 400 A AC/DC, power, voltage, resistance, continuity and much more, in pouch with accessories
 METRACLIP 73: universal, digital clip-on power meter for up to 200 A AC / 300 A DC, voltage (TRMS), energy, resistance, continuity and much more, in case with accessories
 METRACLIP 74: universal, digital clip-on power meter for up to 2000 A AC/DC, voltage (TRMS), energy, resistance, continuity and much more, in case with accessories
 METRACLIP 75 Automotive: handy, digital, RMS clip-on meter to 400 A AC/DC, temperature, voltage, resistance, continuity and much more, in pouch with accessories
 METRACLIP 80: bar graph and digital display, Min-Max and mean value memory, digital interface for PC, integrated 3-phase adapter
 METRACLIP 81: Matrix display for numeric and oscilloscope read-outs, 8 display pages can be saved to memory, Min-Max and mean value memory, data storage for 5 parameters over a period of 24 hours



Type	Data Sheet No.	Article Number		
METRACLIP 72 Power	–	M312E		
METRACLIP 73	–	M312F		
METRACLIP 74	–	M312G		
METRACLIP 75 Automotive	–	M312H		
METRACLIP 80	3-349-054-03	M312C		
METRACLIP 81	3-349-065-03	M312D		



METRACLIP 72 Power	METRACLIP 73	METRACLIP 74	METRACLIP 75 Automotive	METRACLIP 80	METRACLIP 81	Type
< 26 mm dia.	40 mm dia. / 7x52 mm	65 mm dia. / 22x64 mm	< 26 mm dia.	55 mm dia.	60 mm dia.	Clip opening
III / 600 V	IV / 600 V	IV / 600 V	III / 600 V	III / 600 V	IV / 600 V	Measuring category Vmax
Digital	Digital (double)	Digital (double)	Digital	Digital + bar graph	Multimeter + oscilloscope	Display
4000 digits	3000 digits	3000 digits	4000 digits	4½-place	Dot matrix: 160x128 pixels	Resolution
0.2...400 A DC/AC RMS	0.1...200AAC/AC+DCTRMS ...300ADC	1...2000AAV/AC+DC TRMS ...2000ADC	0.2...400 A DC/AC RMS	400/1000 A/DC/AC TRMS	40/400/2000A DC/ACTRMS	Current
0.2...600 V DC/AC RMS	...1000VDC ...750VAC/AC+DCTRMS	...1000VDC ...750VAC/AC+DCTRMS	0.2...600 V DC/AC RMS	400/600 V DC/AC TRMS	4/40/400/600V DC/ACTRMS	Voltage
... 1 kHz			... 1 kHz	20 Hz...1 kHz	10 Hz...1 kHz	Frequency range for UI
Min-Max + HOLD only			Min-Max + HOLD only	Min-Max	Min-Max/mean value/logger	Memory
10...19.99 Hz	... 2 kHz	... 2 kHz	–	20.0 Hz...1 kHz	10.0 Hz...1 kHz	Frequency measurement
–	–	–	–	–	Distortion: CF, THD, DE	Harmonic analysis
1 - 40 Ω	< 30 Ω	< 30 Ω	1 - 40 Ω	–	–	Continuity / buzzer
0.2 - 40 kΩ (3 ranges)	... 2000 Ω	... 2000 Ω	0.2 - 40 kΩ (2 ranges)	–	–	Resistance
2-wire at 50/60 Hz	yes	yes	–	–	–	Phase sequence
5 W to 240 kW	... 200 kW	... 2000 kW	–	10 W...600 kW	4/40/400/1200 kW/VA DC	Active power
–	... 200 kVA	... 2000 kVA	–	10 VA...600 kVA	4/40/400/1200 kW/VA DC	Apparent power
–	... 200 kVar	... 2000 kVar	–	10 var...600 kvar	0 ... 850 kvar	Reactive power
0.2 ... 1.0	0 ... 1	0 ... 1	–	0.3 cap...1...0.3 ind.	0.3 cap...1...0.3 ind.	Power factor
–	... 2000 kWh	... 2000 kWh	–	via PC	●	Energy
–	2/s	2/s	–	9 kHz	9 kHz	Sampling rate
–	–	–	–	–	Special RS 232	Interface
Typically 1% + 2 d	–	–	Typically 1% + 2 d	1%...2.5% rdg. ±5 digits	1%...3% rdg. ±5 digits	Accuracy
9 V, IEC 6 LF22	9 V, IEC 6 LF22	9 V, IEC 6 LF22	9 V, IEC 6 LF22	9 V, IEC 6 LR61	6 ea. IEC LR6	Power supply
70x193x37 mm/0.26 kg	90x270x50 mm/0.55 kg	90x285x50 mm/0.61 kg	70x193x37 mm/0.26 kg	98x251x52 mm/0.5 kg	98x300x52 mm/0.82 kg	Dimensions / weight with battery(ies)

Recommended Workshop Equipment Support Software for Measuring Instruments and Testers – Overview

Recommended workshop equipment according to guidelines issued by ZVEH and VDEW

Required Measuring and Test Instruments	Per Standard	For Initial Users	Standard Device	For Most Efficient Work
Test bay with integrated measuring devices	DIN VDE 0104	METRATESTER 5-3P	SECUTEST 21F	SECUTEST 15P-III
Single-pole voltage tester	DIN VDE 0680, part 6	ProfiSafe 1	METRAVOLT 5	METRAVOLT 12D
2-pole voltage tester	DIN VDE 0680, part 5			
Voltage meter to at least 600 V	DIN VDE 0410	METRA HIT ONE with WZ12A clip-on current transformer	METRA HIT 25S with WZ12C clip-on current transformer	METRA HIT 26S with Z3512 clip-on current transformer
Current meter to at least 15 A	DIN VDE 0410			
Continuity tester	DIN VDE 0403			
Clip-on ammeter to at least 300 A		METRACLIP 60	METRACLIP 70	METRACLIP 81
Insulation measuring instrument	DIN VDE 0413, part 1	PROFITEST 0100S-II	METRISO C	METRISO C
Resistance measuring instrument	DIN VDE 0413, part 4		PROFITEST 0100S-II (or PGS test instrument sets ...)	PROFITEST 0100S-II (or PGS test instrument sets ...)
Earth tester	DIN VDE 0413, part 6 or 7			
Loop resistance measuring instrument	DIN VDE 0413, part 3			
Test instrument for RCCBs	DIN VDE 0413, part 6			
Phase sequence indicator	DIN VDE 0413, part 9			
Measuring instruments for electrical devices	DIN VDE 0701/0702, part 1			
Earth tester	DIN VDE 0413, part 5		GEOHM C	GEOHM C
Continuity tester	DIN VDE 0403		ProfiSafe 1	ProfiSafe 1
Illuminance meter	DIN VDE 5032		MAVOLUX 5032C ^①	MAVOLUX 5032B ^①
Cable detectors			CableCop 300	CableCop 300

^① Sales outlet: GOSSEN Foto- und Lichtmesstechnik GmbH • Thomas-Mann-Str. 16-20 • 90471 Nürnberg, Germany • Phone: +49 (911) 8602 181 • Fax: +49 (911) 8602 142

Support Software for Measuring Instruments and Testers – Overview

Support Software	Suitable for use with the following instruments:																							
	METRA HIT ONE	METRA HIT 22 ... 29S/M	METRA HIT 30M	METRA HIT 27M/I	METRA HIT 16I/T	METRA HIT 16U	METRA HIT 18C	METRA HIT 28C	F5500A / F5520A	METRA HIT 1 ASI	METRAtest 36 ASI	MAVOWATT 45	MAVOLOG	METRATESTER 5-F	METRATESTER 5-3P	SECUTEST SII	SECUTEST SIII	PROFI TEST C	PROFI TEST 0100S-II	PROFI TEST 204	METRISO 5000 D-PI	METRISO C	GEOHM C	
METRAwin 10 / METRA HIT	●	●	●	●	●	●	●	●																
METRAwin 10 / MAVOLOG													●											
PC.doc-ACCESS / MAVOLOG													●											
METRAwin 45												●												
METRAwin 90-2				●			●	●																
METRAwin 90-F									●															
METRAwin 90-FJ									●															
MAVO45-UP												●												
ASI-doc										●	●													
ASI-access										●	●													
PS3																●	●	●	●	●	●	●	●	●
PS3 modules																●	●	●	●	●	●	●	●	●
PS3 Compact																●	●	●	●	●	●	●	●	●
PC.doc-WORD														●	●	●	●	●	●	●	●	●	●	●
PC.doc-ACCESS														●	●	●	●	●	●	●	●	●	●	●
WinProfi																		●	●	●	●	●	●	●
PC.doc remote																●	●							
Remote 204																				●				
SECU-Up																●	●							
ELEKTR0manager																●	●		●	●				

Overview of Laboratory Power Supplies

Computer Controlled Laboratory Power Supplies

Overview	Max. Power W		Setting Range		Setting Accuracy		Residual Ripple		Interfaces			Sink Mode	Overvoltage Protection	Auto-Ranging Output	Output On/Off	Meas. Value Query	Sequence Control
	Continuous	(int.)	Voltage V	Current A	Voltage \pm (% + mV)	Current \pm (% + mA)	Voltage mV _{eff}	Current mA _{eff}	Analog	RS 232	IEEE 488						
SSP 32 N series																	
32 N 20 RU 10 P	120	(200)	0... 20	0... 10	0.15 + 30	0.4 + 35	10	25	●	●	○	dyn.	●	●	●	●	●
32 N 40 RU 6 P	120	(240)	0... 40	0... 6	0.15 + 40	0.5 + 20	10	20	●	●	○	dyn.	●	●	●	●	●
32 N 80 RU 3 P	120	(240)	0... 80	0... 3	0.15 + 80	0.5 + 10	10	10	●	●	○	dyn.	●	●	●	●	●
32 N 20 RU 20 P	240	(320)	0... 20	0... 20	0.15 + 40	0.5 + 70	15	50	●	●	○	dyn.	●	●	●	●	●
32 N 40 RU 12 P	240	(360)	0... 40	0... 12	0.15 + 45	0.5 + 45	15	25	●	●	○	dyn.	●	●	●	●	●
32 N 80 RU 6 P	240	(360)	0... 80	0... 6	0.15 + 80	0.5 + 25	15	20	●	●	○	dyn.	●	●	●	●	●
32 N 32 RU 18 P	320	(430)	0... 32	0... 18	0.15 + 50	0.5 + 70	30	50	●	●	○	dyn.	●	●	●	●	●
SSP 62 N/64 N Series																	
62 N 52 RU 25 P	500		0... 52	0... 25	0.1 + 17	0.2 + 25	10	15	●	○	○	dyn.	●	●	●	●	●
62 N 80 RU 12.5 P	500		0... 80	0... 12.5	0.1 + 20	0.2 + 15	10	15	●	○	○	dyn.	●	●	●	●	●
62 N 52 RU 50 P	1000		0... 52	0... 50	0.1 + 17	0.2 + 50	10	25	●	○	○	dyn.	●	●	●	●	●
62 N 80 RU 25 P	1000		0... 80	0... 25	0.1 + 20	0.2 + 25	15	20	●	○	○	dyn.	●	●	●	●	●
64 N 52 RU 100 P	2000		0... 52	0... 100	0.1 + 17	0.25 + 100	10	80	●	○	○	dyn.	●	●	●	●	●
64 N 80 RU 50 P	2000		0... 80	0... 50	0.1 + 20	0.25 + 50	15	30	●	○	○	dyn.	●	●	●	●	●
64 N 52 RU 150 P	3000		0... 52	0... 150	0.1 + 17	0.3 + 150	10	120	●	○	○	dyn.	●	●	●	●	●
64 N 80 RU 75 P	3000		0... 80	0... 75	0.1 + 20	0.3 + 80	15	60	●	○	○	dyn.	●	●	●	●	●
MSP 64 D Series																	
Basic unit 64 D 42 P																	
MSP control module																	
ES 31 K 7 R 7 P module	49		0... 7	0... ±7	0.05 + 4	0.1 + 4	1	3	-	via Basic device		●	-	-	●	●	-
ES 32 K 30 R 4 P module	120		0... 30	0... ±4	0.05 + 16	0.1 + 2	3	3	-	Basic device		●	-	-	●	●	-
ES 32 K 80 R 1.5 P module	120		0... 80	0... ±1.5	0.05 + 40	0.1 + 1	3	2	-	Basic device		●	-	-	●	●	-
ES 31 K 2x8 R 3 P module	2x24		2x0...8	2x0...±3	0.05 + 4	0.1 + 2	1	3	-	Basic device		●	-	-	●	●	-
ES 31 K 2x16 R 1.5 P module	2x24		2x0...16	2x0...±1.5	0.05 + 8	0.1 + 1	1	2	-	Basic device		●	-	-	●	●	-
ES 31 K 2x40 R 0.6 P module	2x24		2x0...40	2x0...±0.6	0.05 + 20	0.1 + 0.5	3	2	-	Basic device		●	-	-	●	●	-

Analog Controlled Laboratory Power Supplies

Overview	Max. Power W		Setting Range		Total System Error		Residual Ripple		SELV Safety Extra-Low Voltage Analog Interface	Sink Mode	Overvoltage Protection	Auto-Ranging Output	Output On/Off	Output		
	Continuous	(int.)	Voltage V	Current A	Voltage mV	Current mA	Voltage mV _{eff}	Current mA _{eff}						Front Panel	Rear Panel	
SLP 32 N Series																
32 N 20 R 10	120	(200)	0... 20	0... 10	20	28	10	25	●	●	dyn.	-				
32 N 40 R 6	120	(240)	0... 40	0... 6	15	15	10	20	●	●	dyn.	-				
32 N 80 R 3	120	(240)	0... 80	0... 3	15	15	10	10	-	●	dyn.	-				
32 N 20 R 20	240	(320)	0... 20	0... 20	30	38	15	50	●	●	dyn.	-				
32 N 40 R 12	240	(360)	0... 40	0... 12	23	38	15	25	●	●	dyn.	-				
32 N 80 R 6	240	(360)	0... 80	0... 6	23	20	15	20	-	●	dyn.	-				
32 N 32 R 18	320	(430)	0... 32	0... 18	40	50	30	50	●	●	dyn.	-				
33 K Series																
33 K 7 EU 5/2x25 R 1 D	25+25+35		0...25/25/7	0...1/1/5	15/15/17	7/7/12	0.5/0.5/0.5	0.5/0.5/2	●	●	-	--●	-	-		-

Laboratory Power Supplies

Overview	Power max. W		Setting Range		Setting Resolution		Overall System Deviation		Residual Ripple	Mains Input	Output On/Off	Output	
	Continuous	(int.)	Voltage V	Current A	Voltage mV	Current mA	Voltage \pm (% + mV)	Current \pm (% + mA)				Voltage mV _{RMS}	Voltage V _{AC} 50/60 Hz
LSP 32 K series													
32 K 18 R 6	108	(108)	0...18	0... 6	1/5	1	0.04 + 20	0.04 + 20	< 2	115/230	●		-
32 K 36 R 3	108	(108)	0... 36	0... 3	1/10	1	0.04 + 20	0.04 + 20	< 2	115/230	●		-
32 K 65 R 1.5	97	(97)	0... 65	0... 1.5	1/20	1	0.04 + 20	0.04 + 20	< 2	115/230	●		-

SSP KONSTANTER 32 N

Computer Controlled Laboratory Power Supplies: Series SSP 120...320



SSP 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.

Our innovative BET circuit technology (bidirectional energy transformation) allows for practically load independent response times of less than 1 ms (< 4 ms with 80 V device). The analog interface includes monitor, auxiliary power and programmable signal outputs, as well as trigger and setpoint inputs.

- Diverse functionality, extensive calibration report, minimal power loss
- Auto-ranging output with 120 W, 240 W or 320 W
- Output: voltage and current regulated, increased output power for brief intermittent periods
- Very short response times thanks to BET technology, typically 1 ms
- Dynamic sink operation, excellent dynamic control parameters
- Minimal residual ripple, output On/Off function, lockable control panel
- Master-slave operation for parallel and series connection
- Sequence controls for the generation of voltage and current sequences
- Overvoltage, overcurrent and excessive temperature protection, calibration procedure for menu-driven balancing
- RS 232 interface (complete device operation) / analog interface
- Floating output terminals at front and rear, can be electrically and mechanically combined into multi-channel units
- Dimensions: bench-top instrument (W x H x D) 221.5 x 102 x 397.5 mm, for 19" rack: ½19" x 2 standard height units x 400 mm
- Weight: approx. 2.8 kg

Optional:

- IEEE 488 interface (listener/talker for configuration and querying measured values)
- Driver software for LabView, LabWindows CVI and HPVVE
- **Accessories:** assembly accessories for mounting to 19" rack

	Type	Data Sheet No.	Article Number		
120 W	32 N 20 RU 10 P	3-348-843-03	K320A		
	32 N 40 RU 6 P	3-348-843-03	K321A		
	32 N 80 RU 3 P	3-348-843-03	K322A		
240 W	32 N 20 RU 20 P	3-348-843-03	K330A		
	32 N 40 RU 12 P	3-348-843-03	K331A		
	32 N 80 RU 6 P	3-348-843-03	K332A		
320 W	32 N 32 RU 18 P	3-348-843-03	K334A		
	IEEE488 interface	3-348-843-03	K380A		

SSP KONSTANTER 62/64 N

Computer Controlled Laboratory Power Supplies: Series SSP 500... 3000



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 (and back again) under nominal load conditions within response times of less than 10 ms. The analog interface includes monitor and auxiliary power outputs, as well as programmable trigger and setpoint inputs.

- Diverse functionality, minimal power loss
- Auto-ranging output with 500 W, 1000 W, 2000 W or 3000 W
- Output: voltage and current regulated, increased output power for brief intermittent periods
- Short response times thanks to special circuitry, typically 10 ms
- Dynamic sink operation, excellent dynamic control parameters
- Minimal residual ripple, output On/Off function, lockable control panel
- Sequence controls for the generation of voltage and current sequences
- Master-slave operation for parallel and series connection, overcurrent and overtemperature protection
- Analog interface, output terminals at rear panel
- Dimensions: bench-top (W x H x D) 465 x 101 or 190 x 500 mm, for 19" rack: 2 x 19" or 4 std. height units x 500 mm
- Weight: 62 N/500 W: approx. 12 kg, 62 N/1000 W: approx. 13 kg, 64 N/2000 W: approx. 22 kg, 64 N/3000 W: approx. 28 kg

Optional:

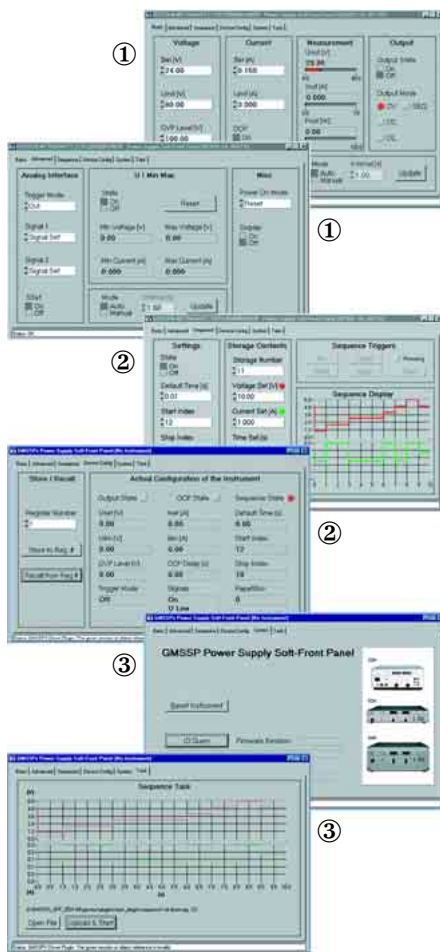
- RS 232 and IEEE 488 interfaces (listener/talker for configuration and querying measured values)
- Driver software for LabView, LabWindows CVI and HPVVE, calibration report upon request

	Type	Data Sheet No.	Article Number		
500 W	62 N 52 RU 25 P	3-349-078-03	K344A		
	62 N 80 RU 12.5 P	3-349-078-03	K341A		
1 kW	62 N 52 RU 50 P	3-349-078-03	K345A		
	62 N 80 RU 25 P	3-349-078-03	K343A		
2 kW	64 N 52 RU 100 P	3-349-078-03	K352A		
	64 N 80 RU 50 P	3-349-078-03	K351A		
3 kW	64 N 52 RU 150 P	3-349-078-03	K362A		
	64 N 80 RU 75 P	3-349-078-03	K361A		
	IEEE488/RS 232 interface	3-349-078-03	K382A		
	RS232 interface	3-349-078-03	K383A		

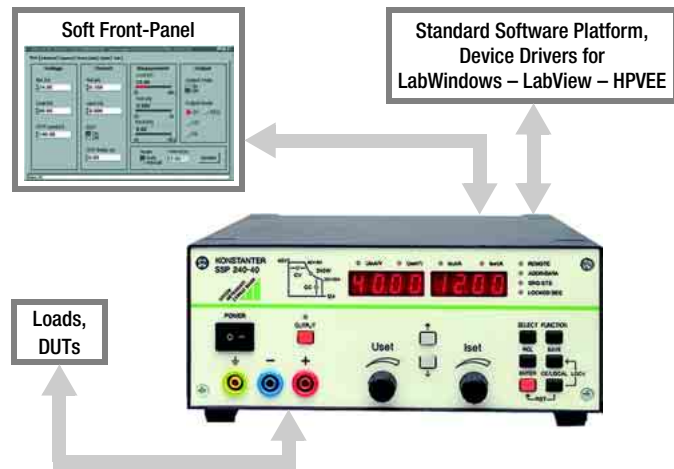
Computer Controlled Laboratory Power Supplies, Soft Front-Panel

GM SSP-SFP

Soft Front-Panel PC User Interface for SSP Konstanters



Virtual instruments: KONSTANTER with soft front-panel



All SSP Konstanter functions can be controlled and displayed at a PC with this software.

- Free download
- For serial as well as IEEE interface
- Runs with Windows 95, 98, NT4 and 2000

Prerequisite: NI-VISA driver or additional NI-488.2 driver for control via GPIB must be installed

Target groups:

- R&D
- Production and test equipment design
- System manufacturers

- ① Integrated software included in our KONSTANTERs simplifies use and allows for the generation of automated sequences.
- ② Intuitive user interface and device drivers for standard software quickly place all of the functional options of KONSTANTER instruments at the disposal of the user, and dramatically shorten learning curves.
- ③ As device-specific software, our soft front-panel provides users with the advantages offered by "virtual instruments" without the need for a complex standard platform.

MSP KONSTANTER 64 D

Computer Controlled Laboratory Power Supplies, Multiple Outputs: MSP Series



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.

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 operate in accordance with the linear controller principle, and the outputs have a 2 quadrant operating range.

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 possible.

- Up to eight independent, electrically isolated outputs, all outputs can also be used as electronic loads
- Minimal residual ripple and short response times
- Output On/Off function
- Outputs can be activated and deactivated individually or in groups
- Measuring function for voltage, current and power with storage of extreme values
- Online help available in various languages by simply pressing a key
- IEEE 488 and RS 232 interfaces
- Easy, flexible device configuration
- Driver software for LabVIEW, LabWindows CVI and HP VEE

Type	Data Sheet No.	Article Number		
64 D 42 P	3-349-084-03	K370A		
MSP control module	3-349-084-03	K371A		
ES 31 K 2x8 R 3 P	3-349-084-03	K372A		
ES 31 K 2x16 R 1.5 P	3-349-084-03	K372B		
ES 31 K 2x40 R 0.6 P	3-349-084-03	K372C		
ES 31 K 7 R 7 P	3-349-084-03	K372D		
ES 32 K 30 R 4 P	3-349-084-03	K373A		
ES 32 K 80 R 1.5 P	3-349-084-03	K373B		

Analog Controlled Laboratory Power Supplies

SLP KONSTANTER 32 N

Laboratory Power Supplies, Analog Interface: SLP Series



Series SLP 120, 240 and 320 (single output laboratory power supplies) are single output, primary switched-mode laboratory power supplies for universal use in R&D, production, training and service applications. Our innovative BET circuit technology (bidirectional energy transformation) allows for practically load independent response times.

- Compact design and minimal weight
- Auto-ranging output with 120 W, 240 W or 320 W
- Minimal power loss
- Output: voltage and current regulated output
- Increased output power for brief intermittent periods
- Very short response times thanks to BET technology, typically 1 ms
- Dynamic sink mode operation
- Excellent dynamic control parameters
- Minimal residual ripple
- Output On/Off function
- Manual adjustment with ten-turn potentiometer
- Remote sensing
- Master-slave operation for parallel and series connection
- Protection against excessive temperature
- Floating output terminals at front and rear panel
- Can be electrically and mechanically combined into multi-output devices
- Assembly accessories for mounting to 19" rack
- Dimensions: bench-top instrument (W x H x D) 221.5 x 102 x 397.5 mm, for 19" rack: ½19" x 2 standard height units x 400 mm
- Weight: approx. 2.8 kg

	Type	Data Sheet No.	Article Number		
120 W	32 N 20 R 10	3-348-796-03	K220A		
	32 N 40 R 6	3-348-796-03	K221A		
	32 N 80 R 3	3-348-796-03	K222A		
240 W	32 N 20 R 20	3-348-796-03	K230A		
	32 N 40 R 12	3-348-796-03	K231A		
	32 N 80 R 6	3-348-796-03	K232A		
320 W	32 N 32 R 18	3-348-796-03	K234A		

LSP KONSTANTER 23/33 K

Laboratory Power Supplies, Analog Interface: LSP Series



KONSTANTER series LSP 85 devices (laboratory and system power supplies) are compact, linear controlled three output devices with extraordinary control characteristics. They are exceptionally well suited for universal use in R&D, production, training and service applications.

Control mode indicators display current operating status. The analog interface includes monitor, auxiliary power supply and signal outputs with status display, and setpoint inputs.

- SELV (safety extra-low voltage)
- Three mutually isolated outputs (at the front panel)
- Constant voltage and constant current operation
- Extremely minimal residual ripple
- Accurate, infinite adjustment of output voltage and current
- Analog interface (for remote control)
- Outputs can be connected for parallel or series operation
- Master-slave operation
- Tracking operation
- Rugged metal housing with carrying handle, suitable for rack-mounting
- Dimensions: bench-top instrument (W x H x D) 219 x 148 x 365 mm, for 19" rack: 3/6 19" x 3 standard height units x 343 + 45 mm
- Weight: approx. 8.7 kg

Type	Data Sheet No.	Article Number		
33 K 7 EU 5/2x25 R 1 D	–	K270A		

Linear Controlled Laboratory Power Supplies Accessories, Software, Panel Mount and OEM Power Supplies



LSP-KONSTANTER 32 K

Linear Controlled Laboratory Power Supplies, LSP 32K Series



Series 32K LSP Konstaterers are high precision DC power supplies for use in R&D, production, training and service applications.

Three variants are available with approximately 100 W of output power. The devices feature excellent regulating accuracy and minimal residual ripple, and outstanding ease of operation.

- Floating output
- Safe electrical separation
- Output can be switched on and off
- Voltage and current regulating (square wave)
- Rotary encoders for adjusting voltage and current
- Adjustment is also possible with keys
- Multifunctional LCD panel
- Setup memory for 10 device settings
- Safety devices
- Attractive design, benchtop instrument, suitable for mounting to 19" racks
- Dimensions in WxHxD: ½ 19" 2 standard height units, approx. 215 x 100 x 280 mm, weight approx. 6 kg

	Type	Data Sheet No.	Article Number		
108 W	32 K 18 R 6	3-349-254-03	K110A		
	32 K 36 R 3	3-349-254-03	K111A		
97 W	32 K 65 R 1.5	3-349-254-03	K112A		

Accessories

Designation	Type	Article Number		
Mains jumper cable, 0.4 m for KONSTANTER	K991A	K991A		
1x32N mounting kit for KONSTANTER	K990A	K990A		
2x32N mounting kit for KONSTANTER	K990B	K990B		
19" rack mount kit for LSP 32K	K992A	K992A		
F48F-C1L socket connector for KONSTANTER	J904A	J904A		
Bus cable, IEEE - IEEE, 2 m, for KONSTANTER	K931A	K931A		
RS 232 bus cable, 0.4 m, for KONSTANTER	K931B	K931B		
RS 232 interface cable, 2 m	Z3241	GTZ3241000R0001		

Software

Lab View device driver for SSP-KONSTANTER	K930D	K930D		
LabWindows CVI device driver for SSP-KONSTANTER	K930E	K930E		
HPVVE / VXI PnP device driver for SSP-KONSTANTER	K930F	K930F		

Panel Mount Power Supplies OEM Power Supplies

Power Supplies for Special Applications, or in Accordance with Customer Specifications



In addition to our standard power supply series, we also fabricate power supplies for special applications, or in accordance with customer specifications, for example:

- Fixed voltage switched-mode power supplies in European plug-in module or cartridge format
- Customer-specific power supplies
- 24 to 12 V DC-DC converters for commercial vehicles

Request data sheets for these products if required.