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Test & Measurement

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Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

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750 WATTS IN A 1U 1/2 RACK PACKAGE

KEPCO SERIES KLN

The Kepco Series KLN 750 Watt power supply is the first product in what will be a new family of low-profile, automatic crossover, high-performance, low-cost programmable power supplies. The KLN offers 750 Watts of stable d-c power in 1U high, half-rack package. A speed controlled fan limits acoustic noise. Programming of voltage, current and their limits may be achieved by analog means or by RS 485 digital control. GPIB or LAN interfaces are factory installed options.



MARKETS AND APPLICATIONS

- Aerospace and Satellite Test • Telecom and IT Industry • Automated Test Equipment
- Factory Automation • QC Testing • Burn-in • Solar • Water Purification • Thermal Process Control • Chemical Processing
- Semiconductor Manufacturing • Battery Charging and Testing • Electroplating, Sputtering and Coating • New Energy R&D



KLN 750 WATT MODEL TABLE

MODEL (8) (9) (10)	D-C OUTPUT RANGE		RIPPLE (3)		LINE REGULATION (5) (11)		LOAD REGULATION (11)		RESPONSE TIME (7)			REMOTE SENSE VOLTAGE DROP (max)
	CV (1)	CC (2)	CV	CC (4)	CV	CC	CV (6)	CC (6)	FULL LOAD UP	FULL LOAD DOWN	NO LOAD DOWN	
	V d-c	A d-c	mV rms	mA rms	0.05% +mV	0.1% +mA	0.05% +mV	0.1% +mA	Sec	Sec	Sec	
KLN 6-100	0-6	0-100	10	180	2.8	11	2.8	23	0.08	0.05	0.6	1
KLN 8-90	0-8	0-90	10	180	2.8	11	2.8	23	0.08	0.05	0.6	1
KLN 20-38	0-20	0-38	10	76	4	5.8	4	12.6	0.08	0.05	0.8	1
KLN 30-25	0-30	0-25	10	63	5	4.5	5	10	0.08	0.08	0.9	1.5
KLN 40-19	0-40	0-19	10	48	6	3.9	6	8.8	0.08	0.08	1	2
KLN 60-12.5	0-60	0-12.5	10	38	8	3.25	8	7.5	0.08	0.08	1.1	3
KLN 80-9.5	0-80	0-9.5	10	29	10	2.95	10	6.9	0.15	0.15	1.2	4
KLN 100-7.5	0-100	0-7.5	10	23	12	2.75	12	6.5	0.15	0.15	1.5	5
KLN 150-5	0-150	0-5	16	18	17	2.5	17	6	0.15	0.15	2	5
KLN 300-2.5	0-300	0-2.5	25	13	32	2.25	32	5.5	0.15	0.15	3	5
KLN 600-1.25	0-600	0-1.25	75	8	62	2.13	62	5.26	0.25	0.3	4	5

(1) Actual output voltage should be $\leq 0.1\%$ of rated voltage when output voltage is set to zero.

(2) Actual output current should be $\leq 0.1\%$ of the rated current when output current is set to zero (resistive load).

(3) Measured when output is within 10%-100% of rated value; ripple bandwidth: 300kHz (rms), noise bandwidth: <20MHz (p-p).

(4) For 6V model: measured when output voltage 2-6V and rated current; all other models measured when output 10-100% of rated voltage and rated current.

(5) Input voltage 100-240V a-c 50/60Hz, static load.

(6) Constant input voltage and output from 10% of loading to full load.

(7) With rated input, resistive load.

(8) Rated power output with input 115V or 230V a-c

(9) Specifications met after 30 minutes of operation, ambient temperature $23 \pm 5^\circ\text{C}$, humidity under 80% R. H., a-c input voltage $\pm 5\%$ of nominal, THD is 2%, not using the remote compensation, not operating in series or parallel.

(10) Add G suffix for models with optional GPIB interface, add E suffix for optional LAN interface.

(11) For example, the spec for KLN 6-100 line regulation and load regulation in CV mode is $0.05\% + 2.8\text{mV}$ (or $6 \times 0.0005 = \pm 3\text{mV} + 2.8\text{mV} = 5.8\text{mV}$, so line and load regulation are within 0.2mV to 5.8mV for 6V model.



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KLN 750 WATT SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION
Voltage and Current display resolution	4 digits (setting and display)
Voltage and Current display setting accuracy	Voltage: $\pm 0.1\% \pm 3C$ at rated voltage (Note 1) Current: $\pm 0.5\% \pm 3C$ at rated current (Note 1)
Voltage and Current display accuracy	Voltage: $\pm 0.2\% \pm 3C$ at rated voltage (Note 1) Current: $\pm 0.5\% \pm 3C$ at rated current (Note 1)
Command setting resolution	$\pm 0.002\%$ of full scale
Command reading resolution	$\pm 0.002\%$ of full scale
Command and Dig-Ana setting accuracy	Voltage: $\pm 0.1\% \pm 3C$ at rated voltage (Note 1) Current: $\pm 0.5\% \pm 3C$ at rated current (Note 1)
Command and Ana-Dig measurement accuracy (Average measurement)	Voltage: $\pm 0.2\% \pm 2C$ at rated voltage (Note 1) Current: $\pm 0.5\% \pm 3C$ at rated current (Note 1)
Analog setting accuracy	Constant Voltage mode (CV): Voltage $\pm 5\%$; Current $\pm 5\%$ Constant Current mode (CC): Voltage $\pm 5\%$; Current $\pm 5\%$
Analog monitor accuracy	Rated voltage output: $10.00V \pm 0.25V$ Zero voltage output: $0.00V \pm 0.25V$ Rated current output: $10.00V \pm 0.25V$ Zero current output: $0.00V \pm 0.25V$
Temp. coefficient	100ppm/°C of rated output voltage, after a 30 minute warm-up
Temp. drift	0.05% of rated Vout over 8 hrs interval following 30 minute warm-up. Constant line, load & temp.
Command response time	$\leq 20ms$ (After received) (Note 4)
Transient response time	Constant Voltage mode: 20V under $\leq 1.5ms$; 30V~100V $\leq 1ms$; 150V~600V $\leq 2ms$
Input voltage	100~240Vac, 50/60Hz
Input current (Full load)	115Vac - 8.5A ; 230Vac - 4.3A
Inrush current	230Vac - 12.5A
Protective Functions	Programmable overvoltage protection (OVP) Programmable overcurrent protection (OCP) Overtemperature protection (OTP) Fuse blown protection
Overvoltage/ Overcurrent setting range	0% to 110% of rated voltage 10% to 110% of rated current
Efficiency	76% – 87%
Power Factor (PF)	0.99 (at 115V a-c, rated output)
RS 485 digital interface	Default baud rate: 115.2k, Max baud rate: 115k Max number of units connected to bus: 001~254 Max effective control distance: 1000 meters
GPIO digital interface	Optional
LAN digital interface	Optional
Withstand Voltage	Input-Outputs - AC2000V: 1 minute Input-Ground - AC2000V: 1 minute

KLN 750 WATT SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION
Dimensions (W x H x D)	8.46" x 1.73" x 18.5", 215mm x 44mm x 470mm
Weight	Approx. 9.9 lbs, 4.5 kg
Noise	<70 dB(A)
Operating environment	Temperature: 0 to 40°C (indoor use) Humidity: 30%~90% RH (no condensation) Altitude: 3000m max
Storage environment	Temperature: -20° to 70°C Humidity: 10%~90% RH (no condensation)
Cooling	Speed Controlled Fan
EMC Standard	EN 61326-1:2006
EMC Emissions	Conducted Disturbance: EN 55011:2007 +A2:2007 Class B Radiated Disturbance: EN 55011:2007 +A2:2007 Class B Harmonic Distortion: EN 61000-3-2:2006 Class A Voltage Fluctuations and Flicker: EN 61000-3-3:2008 Section 5
EMC Immunity	Electrostatic Discharge (ESD): EN 61000-4-2:2009 Class B Radiated RF: EN 61000-4-3:2006 + A1:2008 + A2:2010 Class A Electrical Fast Transients and Bursts: EN 61000-4-4:2004 + A1:2010 Class B Surge: EN 61000-4-5:2006 Class B Conducted Disturbance Induced by RF Fields: EN 61000-4-6:2009, Class A Voltage Dips and Short Interruptions: EN 61000-4-11:2004
Rack Mounting	RA 81-1 One KLN in a standard 19" rack RA 81-2 Two KLN side by side in 19" rack

Note 1: C = 1 count of the last displayed digit

Note 2: All parameters specified with power on for at least 30 minutes, Ambient temperature $23 \pm 5^\circ\text{C}$ /Humidity: Under 80% RH, AC Voltage: $\pm 5\%$, Frequency: $\pm 5\%$.

Note 3: The total voltage should be lower than 600V when connecting 2 units in series.

Note 4: Programming time = Command response time + Output response time.
The output response time differs by model, from 30ms to 200ms.



Analog Interface
RS 485 Interface
(Standard)



LAN Interface
(Optional) Added



GPIB (IEEE 488)
Interface
(Optional) Added

Scan with your smartphone or visit
www.kepcopower.com/kln.htm for full specs



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