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# SERIES **MSK**



Kepco's MSK linear power supplies provide a selection of five models, offering 100 Watts of stable benchtop power. They use a high gain linear (series pass) stabilizer circuit for low noise output, good stability, and accurate resettability.

MSK's "Preview" switch (d-c on-off) allows voltage and current to be pre-set with the digital meters displaying the set values. At "d-c off," no voltage is applied to the output terminals and no load current needs to be drawn to set the current limit. At "d-c on," the set voltage is applied to the output terminals, the appropriate mode indicator illuminates and the meters indicate actual voltage and current.

Convenient heavy duty front panel binding posts, that accept wires or mating "banana" plugs, allow easy connection to your breadboards. A built-in, quiet, low-speed fan ensures good cooling in any environment.

MSK MODEL TABLE					
	d-c OUTPUT RANGE		POWER		
MODEL	VOLTS	AMPS	WATTS		
MSK 10-10M	0-10	0-10	0-100		
MSK 20-5M	0-20	0-5	0-100		
MSK 40-2.5M	0-40	0-2.5	0-100		
MSK 60-2M	0-60	0-2	0-120		
MSK 125-1M	0-125	0-1	0-125		

#### FEATURES

- 10 turn voltage and current controls for exceptional resolution.
- Remote programming by variable resistance.
- Voltage and current mode operation with automatic crossover.
- Voltage and current may be pre-set off-line.
- Linear low noise stabilizer.
- Rack mounting with adapter.





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### **MSK GENERAL SPECIFICATIONS**

SPECIFICATION     RATING/DESCRIPTION     CONDITION       INPUT     Voltage     105-125//210-250V a-c     User selectable (rear switch)       Current     2.8A rms max     Maximum load, 115V a-c       Frequency Range     47-63Hz     OUTPUT       d-c Output     Series pass     Transistor       Type of Stabilizer     Automatic crossover     Voltage/current       Voltage Adjustment     0-100% of rating     0 to +45°C       Range     0-100% of rating     0 to +45°C       Error Sense     0.5V per load wire     Voltage allowance(1)       Voltage Recovery     50µsec typ, 100µsec max     Step load change between 10% and 100% I <sub>0</sub> max       Isolation Voltage     500V d-c or peak     Output to ground       Leakage Current     <50 microamperes     p-p at 115V a-c       OVP     Crowbar SCR Setting tracks output     or more       CONTROL     Programming     Voltage and current     By resistance       Voltage     10-turn precision rheostat     Current     10-turn precision rheostat       Current     10-turn precision rheostat     MECHANICAL     Input Connections       Input						
Voltage105-125/210-250V a-cUser selectable (rear switch)Current2.8A rms maxMaximum load, 115V a-cFrequency Range47-63HzOUTPUTSeries passTransistord-c OutputSeries passVoltage/currentVoltage Adjustment Range0-100% of rating0 to +45°CCurrent Adjustment Range0-100% of rating0 to +45°CCurrent Adjustment Range0.5V per load wireVoltage allowance(1)Voltage Recovery50µsec typ, 100µsec maxStep load change between 10% and 100% lo maxIsolation Voltage500V d-c or peakOutput to groundLeakage Current Output to Ground<50 microamperes	SPECIFICATION	RATING/DESCRIPTION	CONDITION			
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Frequency Range   47-63Hz     OUTPUT     d-c Output   Series pass   Transistor     Type of Stabilizer   Automatic crossover   Voltage/current     Voltage Adjustment Range   0-100% of rating   0 to +45°C     Current Adjustment Range   0-100% of rating   0 to +45°C     Current Adjustment Range   0-100% of rating   0 to +45°C     Error Sense   0.5V per load wire   Voltage allowance(1)     Voltage Recovery   50µsec typ, 100µsec max   Step load change between 10% and 100% lo max     Isolation Voltage   500V d-c or peak   Output to ground     Leakage Current Output to Ground   <50 microamperes	Voltage	105-125/210-250V a-c	User selectable (rear switch)			
OUTPUT       d-c Output     Series pass     Transistor       Type of Stabilizer     Automatic crossover     Voltage/current       Voltage Adjustment Range     0-100% of rating     0 to +45°C       Current Adjustment Range     0-100% of rating     0 to +45°C       Error Sense     0.5V per load wire     Voltage allowance(1)       Voltage Recovery     50µsec typ, 100µsec max     Step load change between 10% and 100% lo max       Isolation Voltage     500V d-c or peak     Output to ground       Leakage Current Output to Ground     <50 microamperes	Current	2.8A rms max	Maximum load, 115V a-c			
d-c OutputSeries passTransistorType of StabilizerAutomatic crossoverVoltage/currentVoltage Adjustment Range0-100% of rating0 to +45°CCurrent Adjustment Range0-100% of rating0 to +45°CCurrent Adjustment Range0-100% of rating0 to +45°CError Sense0.5V per load wireVoltage allowance(1)Voltage Recovery50µsec typ, 100µsec maxStep load change between 10% and 100% lo maxIsolation Voltage500V d-c or peakOutput to groundLeakage Current Output to Ground<50 microamperes	Frequency Range	47-63Hz				
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100µsec max 10% and 100% lo max   Isolation Voltage 500V d-c or peak Output to ground   Leakage Current <5 microamperes	Error Sense	0.5V per load wire	Voltage allowance(1)			
Leakage Current   <5 microamperes	Voltage Recovery					
Output to Ground     <50 microamperes     p-p at 115V a-c       OVP     Crowbar SCR Setting tracks output     Transient 5 milliseconds or more       CONTROL     Programming     Voltage and current     By resistance       Voltage     10-turn precision rheostat     Current     Inoturn precision rheostat       MECHANICAL     IEC detachable line cord     Output connections     Front panel binding posts     Output, sense & ground(2)       Meters     Voltage     Two 3½" LCD digital displays     ±1 digit     ±1% l <sub>0</sub> ±1 digit       Cooling     1800 rpm low noise blower     1800 rpm low noise     ±1% l <sub>0</sub> ±1 digit	Isolation Voltage	500V d-c or peak	Output to ground			
OVP Crowbar SCR Setting tracks output Transient 5 milliseconds or more   CONTROL   Programming Voltage and current By resistance   Voltage 10-turn precision rheostat   Current 10-turn precision rheostat   MECHANICAL   Input Connections IEC detachable line cord   Output Connections Front panel binding posts Output, sense & ground(2)   Meters Voltage Two 3½" LCD digital displays ±1 digit   Cooling 1800 rpm low noise blower ±1% l <sub>o</sub> ±1 digit	Leakage Current	<5 microamperes	rms at 115V a-c			
Setting tracks output or more   CONTROL   Programming Voltage and current By resistance   Voltage 10-turn precision rheostat Current   Current 10-turn precision rheostat MECHANICAL   Input Connections IEC detachable line cord Output, sense & ground <sup>(2)</sup> Meters Voltage Two 3½" LCD digital displays ±1 digit   Cooling 1800 rpm low noise blower ±1% l <sub>o</sub> ±1 digit	Output to Ground	<50 microamperes	p-p at 115V a-c			
Programming Voltage and current By resistance   Voltage 10-turn precision rheostat Inotation (1000)   Current 10-turn precision rheostat Inotation (1000)   MECHANICAL IEC detachable line cord Output Connections IEC detachable line cord   Output Connections Front panel binding posts Output, sense & ground(2)   Meters Voltage Two 3½" LCD digital displays ±1 digit   Cooling 1800 rpm low noise blower ±1% lo ±1 digit	OVP					
Voltage   10-turn precision rheostat     Current   10-turn precision rheostat     MECHANICAL     Input Connections   IEC detachable line cord     Output Connections   Front panel binding posts   Output, sense & ground(2)     Meters   Voltage   Two 3½″ LCD digital displays   ±1 digit     Cooling   1800 rpm low noise blower   ±1% l <sub>0</sub> ±1 digit	CONTROL					
Current   10-turn precision rheostat     MECHANICAL     Input Connections   IEC detachable line cord     Output Connections   Front panel binding posts   Output, sense & ground(2)     Meters   Voltage   Two 3½" LCD digital displays   ±1 digit     Cooling   1800 rpm low noise blower   ±1% l <sub>o</sub> ±1 digit	Programming	Voltage and current	By resistance			
MECHANICAL       Input Connections     IEC detachable line cord       Output Connections     Front panel binding posts     Output, sense & ground <sup>(2)</sup> Meters     Voltage     Two 3½" LCD digital displays     ±1 digit       Cooling     1800 rpm low noise blower     ±1% l <sub>o</sub> ±1 digit	Voltage	10-turn precision rheostat				
Input Connections     IEC detachable line cord       Output Connections     Front panel binding posts     Output, sense & ground(2)       Meters     Voltage     Two 3½" LCD digital displays     ±1 digit       Cooling     1800 rpm low noise blower     ±1% l <sub>o</sub> ±1 digit	Current	10-turn precision rheostat				
Output Connections     Front panel binding posts     Output, sense & ground <sup>(2)</sup> Meters     Voltage     Two 3½″ LCD digital displays     ±1 digit       Cooling     1800 rpm low noise blower     ±1% l <sub>0</sub> ±1 digit						
Meters     Voltage Current     Two 3½″ LCD digital displays     ±1 digit ±1% l <sub>o</sub> ±1 digit       Cooling     1800 rpm low noise blower     ±1% l <sub>o</sub> ±1 digit	Input Connections	IEC detachable line cord				
Current     displays     ±1% I <sub>0</sub> ±1 digit       Cooling     1800 rpm low noise blower     ±1% I <sub>0</sub> ±1 digit	Output Connections	Front panel binding posts	Output, sense & ground <sup>(2)</sup>			
Cooling     1800 rpm low noise blower     1800 rpm low noise	Meters Voltage		±1 digit			
blower	Current	displays	±1% l <sub>o</sub> ±1 digit			
Dimensions inches $53/(3) \times 81/(1) \times 135/(2)$	Cooling					
	Dimensions inches	5 <sup>3</sup> / <sub>4</sub> (3) x 8 <sup>1</sup> / <sub>8</sub> x 13 <sup>5</sup> / <sub>32</sub>				
(HxWxD) mm 146 x 206 x 334	(HxWxD) mm	146 x 206 x 334				
Finish: Fed Std 595 Light gray, color 26440 Front panel, 2 tone	Finish: Fed Std 595	Light gray, color 26440	Front panel, 2 tone			
Weight (packed for shipment)19lbs (8.6Kg)MSK 10-10M, MSK 20-5M, MSK 40-2.5M		19lbs (8.6Kg)				
21lbs (9.5Kg) MSK 60-2M & MSK 125-1M		21lbs (9.5Kg)	MSK 60-2M & MSK 125-1M			

(1) An additional volt is provided in the output beyond the rating for this purpose.

(2) Ground terminal permits grounding of either plus or minus output terminal.

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MSK STATIC SPECIFICATIONS		5	
INFLUENCE QUANTITY		VOLTAGE MODE*	CURRENT MODE*
Source: 105-125/210-250V a-c		0.01%	0.01%
Load: No load - full load		0.01%	0.05%
Time: 8-hour drift		0.01%	0.02%
Temperature: per °C		0.01%	0.02%
Ripple and Noise:	rms	0.5mV	0.02%
	р-р	3.0mV	0.1%

\* Note: Percentage values are referenced to the maximum rated voltage or current of the unit.

#### **OUTLINE DIMENSIONAL DRAWINGS**

Fractional dimensions in light face type are in inches, dimensions in bold face type are in millimeters. Tolerance:  $\pm 1/64^*$  (0.4) between mounting holes  $\pm 1/32^*$  (0.8) other dimensions









