

## Specifications

Note: All specifications apply to the unit after a temperature stabilization time of 15 minutes over an ambient temperature range of 23 °C ± 5 °C. Specifications are valid for single unit operation only.

Model		MR3K160120	MR160120	MR25080	MR50040	MR100020
<b>Output Rating</b>						
Output Voltage	0 to 160 V		0 to 250 V		0 to 500 V	0 to 1000 V
Output Current	0 to 120 A		0 to 80 A		0 to 40 A	0 to 20 A
Output Power	3000 W	5000 W				
<b>Line Regulation</b>						
Voltage	32 mV		15 mV	55 mV	80 mV	
Current	60 mA		20 mA	12 mA	10 mA	
<b>Load Regulation</b>						
Voltage	80 mV		120 mV	200 mV	250 mV	
Current	180 mA		50 mA	40 mA	25 mA	
<b>Ripple and Noise (20 Hz to 20 MHz)</b>						
Voltage p-p	120 mV	160 mV	500 mV	600 mV	700 mV	
Voltage rms	48 mV		85 mV	75 mV	120 mV	
Current rms <sup>(1)</sup>	120 mA	160 mA	20 mA	10 mA	5 mA	
<b>Resolution</b>						
Programming	10 mV / 7.5 mA		10 mV / 5 mA	20 mV / 2 mA	100 mV / 1 mA	
Readback	10 mV / 7.5 mA		10 mV / 5 mA	20 mV / 2 mA	100 mV / 1 mA	
<b>Programming Accuracy</b>						
Voltage	160 mV		100 mV	300 mV	500 mV	
Current	360 mA		60 mA	50 mA	25 mA	
<b>Readback Accuracy</b>						
Voltage	160 mV		250 mV	300 mV	500 mV	
Current	240 mA		60 mA	50 mA	25 mA	
<b>Output Response Time<sup>(2)</sup></b>						
Rise Time	Full Load	≤ 30 ms		≤ 30 ms		
	No Load	≤ 30 ms		≤ 30 ms		
Fall Time	Full Load	≤ 80 ms	≤ 50 ms	≤ 55 ms	≤ 40 ms	≤ 50 ms
	No Load	≤ 10 s		≤ 8 s	≤ 10 s	≤ 10 s
<b>Protection</b>						
OVP	Range	0 to 176 V		0 to 275 V	0 to 550 V	0 to 1100 V
	Accuracy	1.6 V		2.5 V	5 V	10 V
OCP	Range	0 to 132 A		0 to 96 A	0 to 48 A	0 to 24 A
	Accuracy	1.2 A		0.8 A	0.4 A	0.2 A

(1) Current ripple is applied when output power > 1.0% of full power.

(2) From 10% to 90% or from 90% to 10% of total voltage excursion.

## High Voltage Multi-Range DC Power Supplies

### MR Series

Model	MR3K160120	MR160120	MR25080	MR50040	MR100020
<b>General</b>					
Remote Sense Compensation	3.2 V		5 V	10 V	20 V
Transient Response Time <sup>(3)</sup>	≤ 1.5 ms				
Command Response Time <sup>(4)</sup>	10 ms				
Efficiency <sup>(5)</sup>	≥ 80%	≥ 85%			
Power Factor	0.99				
I/O Interfaces	Analog (Galvanically isolated DB25), USB (USBTMC-compliant and virtual COM), RS232, GPIB, LAN (1.5 LXI device specification 2016)				
AC Line Input	200 to 240 VAC ± 10%, 47 Hz to 63 Hz				
AC Line Phase	Single phase				
Maximum Rated Input Power	4000 VA	6000 VA			
Temperature Ratings	Operation	32 °F to 104 °F (0 °C to 40 °C)			
	Storage	14 °F to 158 °F (-10 °C to 70 °C)			
Temperature Coefficient	Voltage	32 mV / °C	50 mV / °C	100 mV / °C	200 mV / °C
	Current	48 mA / °C	32 mA / °C	16 mA / °C	8 mA / °C
Dimensions (W×H×D)	16.5" x 3.5" x 21" (420 x 88 x 532 mm)				
Weight	38.6 lbs (17.5 kg)				
Warranty	3 Years				
Standard Accessories	Power cord, test report & certificate of calibration				
Optional Accessories	Rack mount kit (RKPVS)				

<b>Regulatory Compliance</b>	
Safety	Low Voltage Directive (LVD) 2014/35/EU, EN61010-1:2010, cTUVus certification mark <sup>(6)</sup> fulfills US (UL 61010-1:2012) and Canadian (CAN/CSA-C22.2 NO. 61010-1-12) safety standards
Electromagnetic Compatibility	EMC Directive 2014/30/EU, EN61326-1:2013

(3) Time for output voltage to recover within 1% of its rated output voltage for a load change 50-100% of rated output current.

(4) Typical time required for output to begin to change following receipt of command data.

(5) At nominal line and maximum load.

(6) Tested and certified by a Nationally Recognized Testing Laboratory (NRTL), accredited by OSHA.

## Ordering Information

### MR Series Power Supplies

Model	Description
MR3K160120	160 V / 120 A, 3000 W
MR160120	160 V / 120 A, 5000 W
MR25080	250 V / 80 A, 5000 W
MR50040	500 V / 40 A, 5000 W
MR100020	1000 V / 20 A, 5000 W