



## GENERAL SPECIFICATIONS

### OPERATION

**Constant Current:** 0 to selected full scale current  
 Prog. Accuracy (Range): (high/med) ranges:  $\pm 0.25\%$  (low) range:  $\pm 0.5\%$   
 Regulation:  $\pm 0.1\%$  of selected full scale  
 Resolution(IEEE): 1/4000 of selected full scale  
**Constant Resistance:** Constant Resistance mode  
 operates in Amps/Volt, IEEE units entered in ohms or A/V  
 Prog. Accuracy:  $\pm 3\%$  of selected full scale  
 Regulation:  $\pm 3\%$  of selected full scale  
 Resolution(IEEE): 1/4000 of selected full scale  
**Constant Voltage:** 0 to selected selected full scale  
 Prog. Accuracy (Range): (high/med) ranges:  $\pm 0.25\%$  (low):  $\pm 0.5\%$   
 Regulation:  $\pm 0.15\%$  of selected full scale  
 Resolution(IEEE): 1/4000 of selected full scale  
**Constant Power:** 0 to full scale power  
 Prog. Accuracy:  $\pm 3\%$  of full scale  
 Regulation:  $\pm 3\%$  of full scale  
 Resolution(IEEE): 0.25% of full scale power  
**ANALOG MODE**  
**Ext. Prog:** 0 to 10 Volts input yields 0 to selected full

scale loading in all operating modes.  
 Input Impedance: 330k Ohms  
 Prog. Response: Limited by internal adjustable slew rate limiter

### PULSE MODE

Frequency: 0.06Hz to 3,333Hz  
 Accuracy: 0.1%  
 Duty Cycle: 0 - 100%(IEEE), 10 - 90%(Analog)  
 Accuracy: 0.1%

### Adjustable Slew Rate:

Max: 0 to full scale in 10 $\mu$ s  
 Min: 0 to full scale in 10ms

### OUTPUT SIGNALS

**Current Sample Output:**

Scaling: 10 Volts = selected full scale  
 Accuracy:  $\pm 0.5\%$  of selected full scale  
**Sync Output:**  
 Timing: Synchronous with pulse generator.  
 Output: Sink with 10k pull up to +15V

### PROTECTION

**Current Limit:**  
 Analog Models: Approximately 105% of selected full scale current  
 Range(IEEE): 0 - 105% of selected full scale  
 Resolution(IEEE): 0.5% of selected full scale  
**Voltage Limit:**  
 Analog Models: Load disconnect at 105% of selected full scale voltage  
 Range(IEEE): 0 - 105% of selected full scale  
 Resolution(IEEE): 0.5% of selected full scale  
**Power Limit:**  
 Analog Models: Approximately 4250 Watts  
 Range(IEEE): 0 - 4200 Watts  
 Resolution(IEEE): 20 Watts  
**Thermal:**  
 Load disconnect at internal temperature of 105°C  
 Load inhibited at less than 1 Volt, when enabled

### Undervoltage:

### IEEE-488 READBACKS

**Current:**  
 Resolution: 1/4000 of Selected Full Scale  
 Accuracy(Range): (High/Med):  $\pm 0.25\% \pm 1$  Digit (Low):  $\pm 0.5\% \pm 1$  Digit

**Voltage:**  
 Resolution: 1/4000 of Selected Full Scale  
 Accuracy(Range): (High/Med):  $\pm 0.25\% \pm 1$  Digit (Low):  $\pm 0.5\% \pm 1$  Digit

**Power:**  
 Resolution: 1 Watt  
 Accuracy: 0.50%

### MISCELLANEOUS

**AC Input:** User Selectable 100VAC, 120VAC, 200VAC, 240VAC,  $\pm 10\%$ , 48 - 62 Hz @ 350W

**Ambient Temp:** 0°C to 40°C

## RBL488 50-1000-4000

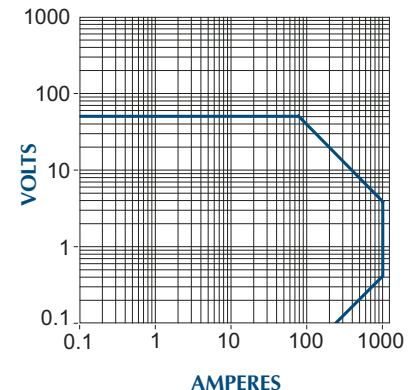
### OPERATING RANGES (FULL SCALES)

**Voltage:** 10 Volts, 20 Volts, 50 Volts  
**Current:** 100 Amps, 500 Amps, 1000 Amps  
**Power:** 4000 Watts  
**Short Circuit:** 0.0004 Ohms max.

### CONSTANT RESISTANCE RANGES

| High Ohms Mode |           |            |           |
|----------------|-----------|------------|-----------|
| Range          | 100A      | 500A       | 1000A     |
| 10V            | 0-5 A/V   | 0-25 A/V   | 0-50 A/V  |
| 20V            | 0-2.5 A/V | 0-12.5 A/V | 0-25 A/V  |
| 50V            | 0-1 A/V   | 0-5 A/V    | 0-10 A/V  |
| Low Ohms Mode  |           |            |           |
| Range          | 100A      | 500A       | 1000A     |
| 10V            | 0-50 A/V  | 0-250 A/V  | 0-500 A/V |
| 20V            | 0-25 A/V  | 0-125 A/V  | 0-250 A/V |
| 50V            | 0-10 A/V  | 0-50 A/V   | 0-100 A/V |

### INPUT CHARACTERISTICS:



# SAFE OPERATING AREA & SPECIFICATIONS

The RBL 488 Dynaload Series features 400, 800, 2000 and 4000 watt models with wide range IEEE 488 computer programming. Individual models are designed for low voltage high current application up to 1000 amperes at fractions of a volt whereas other models are designed for midrange applications and high voltage applications up to 1000 volts. Equivalent RBL Dynaloads are available with RS 232 and Analog programming for laboratory as well as production applications. All models include easy to apply master slave parallel capabilities and all higher power models incorporate variable speed forced air cooling to assure a quiet environment. Features include:

- High Speed Adjustable Slew Rate
- Front Panel or Remote Control
- 19 inch Rack Mount - 5U high
- Pulse Load Shaping
- Full Range Switching
- Quiet Variable Speed Fans

## RBL488 100-600-4000

### OPERATING RANGES (FULL SCALE range)

**Voltage:** 10 Volts, 50 Volts, 100 Volts  
**Current:** 20 Amps, 200 Amps, 600 Amps  
**Power:** 4000 Watts  
**Short Circuit:** 0.003 Ohms max.

### CONSTANT RESISTANCE RANGES

#### High Ohms Mode

| Range | 20A      | 200A     | 600A     |
|-------|----------|----------|----------|
| 10V   | 0-1 A/V  | 0-10 A/V | 0-30 A/V |
| 50V   | 0-.2 A/V | 0-2 A/V  | 0-6 A/V  |
| 100V  | 0-1 A/V  | 0-1 A/V  | 0-3 A/V  |

#### Low Ohms Mode

| Range | 20A      | 200A      | 600A      |
|-------|----------|-----------|-----------|
| 10V   | 0-10 A/V | 0-100 A/V | 0-300 A/V |
| 50V   | 0-2 A/V  | 0-20 A/V  | 0-60 A/V  |
| 100V  | 0-1 A/V  | 0-10 A/V  | 0-30 A/V  |

## RBL488 400-600-4000

### OPERATING RANGES (FULL SCALES)

**Voltage:** 20 Volts, 200 Volts, 400 Volts  
**Current:** 20 Amps, 200 Amps, 600 Amps  
**Power:** 4000 Watts  
**Short Circuit:** 0.010 Ohms max.

### CONSTANT RESISTANCE RANGES

#### High Ohms Mode

| Range | 20A        | 200A      | 600A      |
|-------|------------|-----------|-----------|
| 20V   | 0-.5 A/V   | 0-5 A/V   | 0-15 A/V  |
| 200V  | 0-.05 A/V  | 0-5 A/V   | 0-1.5 A/V |
| 400V  | 0-.025 A/V | 0-.25 A/V | 0-.75 A/V |

#### Low Ohms Mode

| Range | 20A       | 200A      | 600A      |
|-------|-----------|-----------|-----------|
| 20V   | 0-5 A/V   | 0-50 A/V  | 0-150 A/V |
| 200V  | 0-.5 A/V  | 0-2.5 A/V | 0-15 A/V  |
| 400V  | 0-.25 A/V | 0-2.5 A/V | 0-7.5 A/V |

## RBL488 600-200-4000

### OPERATING RANGES (FULL SCALES)

**Voltage:** 20 Volts, 200 Volts, 600 Volts  
**Current:** 2 Amps, 20 Amps, 200 Amps  
**Power:** 4000 Watts  
**Short Circuit:** 0.035 Ohms max.

### CONSTANT RESISTANCE RANGES

#### High Ohms Mode

| Range | 2A          | 20A        | 200A       |
|-------|-------------|------------|------------|
| 20V   | 0-.05 A/V   | 0-.5 A/V   | 0-5 A/V    |
| 200V  | 0-.005 A/V  | 0-.05 A/V  | 0-.5 A/V   |
| 600V  | 0-.0016 A/V | 0-.016 A/V | 0-.166 A/V |

#### Low Ohms Mode

| Range | 2A         | 20A        | 200A        |
|-------|------------|------------|-------------|
| 20V   | 0-.5 A/V   | 0-5 A/V    | 0-50 A/V    |
| 200V  | 0-.05 A/V  | 0-.5 A/V   | 0-5 A/V     |
| 600V  | 0-.016 A/V | 0-.166 A/V | 0-1.666 A/V |

## RBL488 1000-100-3000

### OPERATING RANGES (FULL SCALES)

**Voltage:** 100 Volts, 500 Volts, 1000 Volts  
**Current:** 2 Amps, 20 Amps, 100 Amps  
**Power:** 3000 Watts  
**Short Circuit:** 0.033 Ohms max.

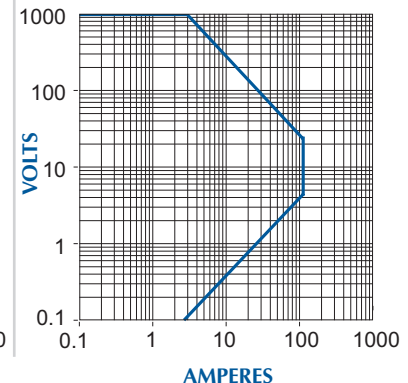
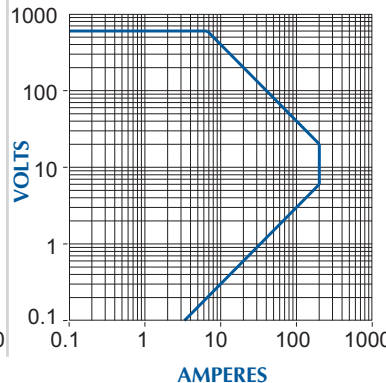
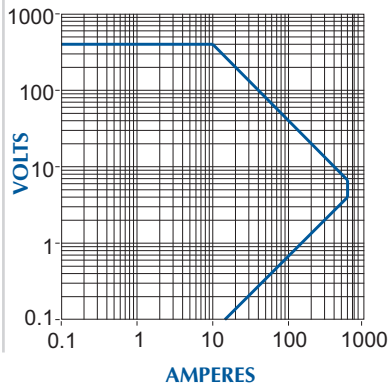
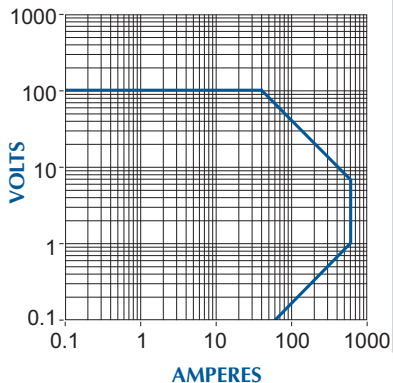
### CONSTANT RESISTANCE RANGES

#### High Ohms Mode

| Range | 2A         | 20A       | 100A      |
|-------|------------|-----------|-----------|
| 100V  | 0-.01 A/V  | 0-.10 A/V | 0-.50 A/V |
| 500V  | 0-.002 A/V | 0-.02 A/V | 0-.10 A/V |
| 1000V | 0-.001 A/V | 0-.01 A/V | 0-.05 A/V |

#### Low Ohms Mode

| Range | 2A        | 20A       | 100A      |
|-------|-----------|-----------|-----------|
| 100V  | 0-.10 A/V | 0-1.0 A/V | 0-5 A/V   |
| 500V  | 0-.02 A/V | 0-.20 A/V | 0-1.0 A/V |
| 1000V | 0-.01 A/V | 0-.10 A/V | 0-.50 A/V |



# 4000W OUTLINE

