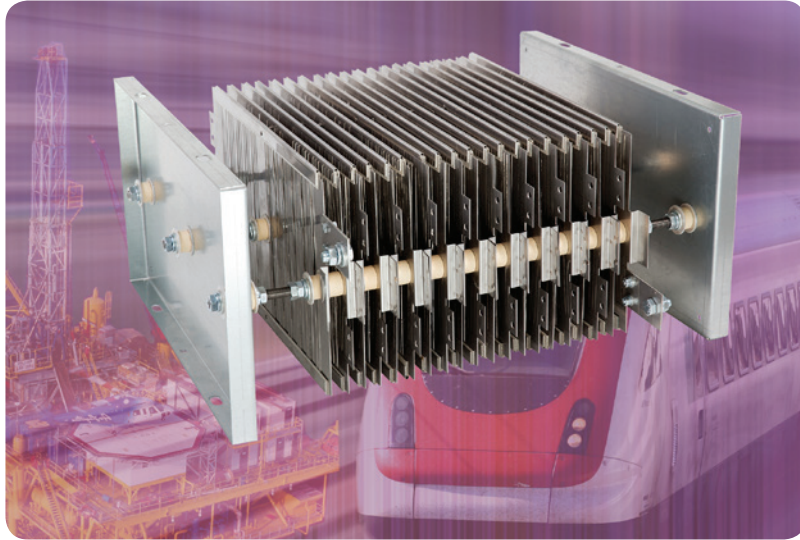


High-Power, High-Current Grid Resistors



KEY BENEFITS

- Resistance range: 0.25 Ω to 50 Ω
- Low inductance: 10 μH to 40 μH
- Drop-in replacement for competitive products
- Modular design
- Power rating from 4 000 W to 24 000 W
- IP20- and IP23-rated enclosures available to hold 1-, 2-, or 3-resistor banks. See datasheet for details and dimensions

APPLICATIONS

- Industrial
- Locomotives
- Renewable energy
- Harmonic filtering
- Neutral grounding

RESOURCES

- Datasheet for GRE1/GRE2: <http://www.vishay.com/doc?31833>
- For technical questions contact vishaymilwaukeeresistor@vishay.com





High-Power, High-Current Grid Resistors

OVERVIEW

Vishay Milwaukee Resistor, a division of Vishay Dale Electronics, offers a complete line of custom and standard grid resistors (GRE1, GRE2), also known as steel grid, punched grid, and plate resistors. With a robust all-welded construction, Vishay Milwaukee Resistor grid resistors are designed using stainless steel resistance elements to repeatedly absorb high-energy pulses.

APPLICATIONS OF GRID RESISTORS

Dynamic Braking

When an electric-motor-driven load is being decelerated, the motor acts as a generator, converting kinetic energy of the load to electrical energy. The dynamic braking circuit converts this electrical energy into heat to slow the load, through the use of dynamic braking resistors. Braking resistors ensure proper motor operation, allow heavy loads to stop quickly, and protect the drive from damage. Furthermore, dynamic braking resistors that are improperly cooled, incorrectly sized, physically damaged, or electrically compromised can cause costly and unwanted down time.

Harmonic Filters

Within a harmonic filter installation, the filter resistors are used to dissipate unwanted harmonic frequencies as heat.

Load Banks

Custom-designed resistive load banks allow for load simulation of many electrical applications for testing purposes.

CONTACT THE FACTORY FOR CUSTOM DESIGNS, AND OPTIONS FOR STANDARD DESIGNS

Options include: custom mounting configurations, custom IP-rated enclosures, element size / shape, power, multiple resistors in a single enclosure, etc.

For custom designs please include: duty cycle, total power, resistance, and mounting requirements.

GLOBAL PART NUMBER	POWER RATING (W)	MIN. RESISTANCE (Ω)	MAX. RESISTANCE (Ω)	TOLERANCE (%)	TEMPERATURE COEFFICIENT (PPM/ $^{\circ}$ C)
GRE2AxxxxxK00N0000	4000	0.04	10	10	\pm 930
GRE2BxxxxxK00N0000	6000	0.06	15	10	\pm 930
GRE2CxxxxxK00N0000	8000	0.08	20	10	\pm 930
GRE2DxxxxxK00N0000	10 000	0.1	25	10	\pm 930
GRE2ExxxxxK00N0000	12 000	0.12	30	10	\pm 930
GRE2FxxxxxK00N0000	14 000	0.14	35	10	\pm 930
GRE2GxxxxxK00N0000	16 000	0.16	40	10	\pm 930
GRE2HxxxxxK00N0000	18 000	0.1	45	10	\pm 930
GRE2JxxxxxK00N0000	20 000	0.2	50	10	\pm 930
GRE2KxxxxxK00N0000	22 000	0.22	55	10	\pm 930
GRE2LxxxxxK00N0000	24 000	0.24	60	10	\pm 930

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE	ENCLOSURE TYPE	ENCLOSURE HEIGHT	SPECIAL
5 digits	5 digits	1 digit	2 digits	1 digit	4 digits
GRE2A to GRE2L per electrical table above	2R128 = 2.128 Ω	K = 10 % (standard)	00 = IP00 / NEMA 0 (standard)	N = No enclosure (standard)	Allowable range
	R - Decimal resistance value is for each individual resistor bank	Tolerance value is for each individual resistor bank	IP = IP rating 00 = IP00 / NEMA 0 (open) 20 = IP20 / NEMA 1 (screen) 23 = IP23 / NEMA 3 (outdoor)	GRE2 options 1 = 1 resistor bank high 2 = 2 resistor banks high 3 = 3 resistor banks high Assumes all resistor banks to be identical, per the first 11 digits of the part number, and all resistors will be customer wired as required.	00000 to ZZZZZ alphanumeric engineering controlled internal document number