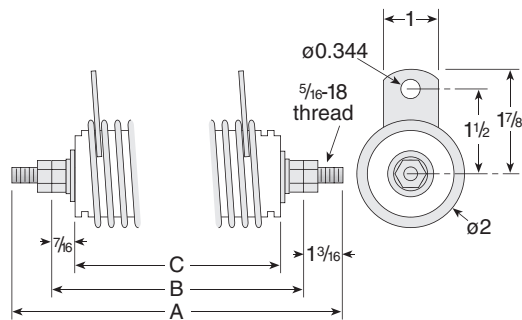


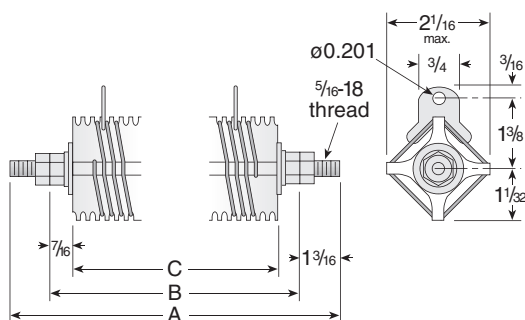
Edgeohm & Hexohm Helical Wound

WLRB, WLRC, WLRF Series



| Length | A | B | C | Shipping Wt. |
|--------|----------------------------------|-----|----------------------------------|--------------|
| 2 | 9 ³ / ₈ " | 7" | 6 ¹ / ₈ " | 2 lbs. |
| 3 | 12 ³ / ₈ " | 10" | 9 ¹ / ₈ " | 3 lbs. |
| 4 | 15 ³ / ₈ " | 13" | 12 ¹ / ₈ " | 4 lbs. |
| 5 | 18 ³ / ₈ " | 16" | 15 ¹ / ₈ " | 5 lbs. |

All values for reference only; Consult factory for details.



| Length | A | B | C | Shipping Wt. |
|--------|----------------------------------|-----|----------------------------------|--------------|
| 2 | 9 ³ / ₈ " | 7" | 6 ¹ / ₈ " | 1 lbs. |
| 3 | 12 ³ / ₈ " | 10" | 9 ¹ / ₈ " | 2 lbs. |
| 4 | 15 ³ / ₈ " | 13" | 12 ¹ / ₈ " | 3 lbs. |
| 5 | 18 ³ / ₈ " | 16" | 15 ¹ / ₈ " | 4 lbs. |

All values for reference only; Consult factory for details.

A real power house! High element mass allows Edgeohm resistors to handle high current intermittent duty applications beyond the range of Ribflex resistors. Ideal for continuous duty service where low resistance and high current are required. Hexohm resistors are the choice for lower current applications.

Edgeohm resistors are built to stringent manufacturing specifications, and feature the highest quality helical wound resistance alloy. The helix, wound on a threaded ceramic core, assures a fixed mechanical distance is maintained between turns—even under extreme overload conditions. Resistance element terminations are welded or silver brazed depending on application requirements.

Hexohm resistors use quality resistance wire alloys and meet the same stringent manufacturing specifications as the Edgeohm line.

Both types of resistors are supported by a threaded steel rod passing through the center of the ceramic core. Mica washers insulate and increase the dielectric strength of the resistor assembly.

SPECIFICATIONS

Electrical

Voltage: Standard Edgeohm and Hexohm resistors are designed to operate at 600 volts maximum between terminals. For greater voltages, connect two or more resistors in series so voltage drop across any individual resistor is 600 volts or less. Voltage between resistor terminals and ground should not exceed 250 volts. Insulated supports must be used if greater voltages are applied. Contact factory for insulated supports and special 1000 volt units.

Resistance Tolerance: Standard Tolerance is ±10% for all forms.

Power Rating: Choose from 280-440, 425-700, 600-950, and 750-1220 watt range forms. These are continuous duty ratings based on a temperature rise of 375°C (675°F) in a 40°C ambient.

Coefficient of Resistivity: The factor for coefficient of resistivity is negligible for most applications and can be ignored when selecting a resistor. Contact factory for additional information.

Altitude: Resistors operating at 6,000 to 12,000 feet above sea level must be derated to 75% of their maximum power rating.

Options

Twenty-three ampere ratings in four wattage ranges are available in no tap or fixed tap forms. Adjustable taps are offered for some forms. Contact Ohmite for information on stackable rack mounted resistor banks and enclosures.

Ordering Information

Order individual resistors, with or without fixed taps. Contact Ohmite for details on adjustable taps and your specific requirements.

Call for information on resistor banks, insulators for high voltage (600 Volt maximum) and special 1000 Volt maximum forms.

Lengths 3 and 4 only are available in the special 1000 Volt forms. Order by inserting a letter Z at the end of the part number (example WLRF4A5Z).

Individual replacement units or entire grids with different mountings are available. Contact us about your specific requirements.

EDGEOHM AND HEXOHM POWER RESISTORS

| Length 2 | | | Length 3 | | | Length 4 | | | Length 5 | | |
|------------------------------------|---------|-------|-------------------------------------|-------|---------|---------------------------------|---------|------|------------------------------------|------|--|
| Wattage Rating: 280 - 440 watts | | | Wattage Rating: 425 - 700 watts | | | Wattage Rating: 600 - 950 watts | | | Wattage Rating: 750 - 1220 watts | | |
| Ampere Range: 6.5 - 96.0 amps | | | Ampere Range: 6.5 - 96.0 amps | | | Ampere Range: 6.5 - 96 amps | | | Ampere Range: 6.5 - 96 amps | | |
| Resistance Range: 0.049 - 6.4 ohms | | | Resistance Range: 0.075 - 10.0 ohms | | | Resistance Range: 0.1 - 13 ohms | | | Resistance Range: 0.13 - 17.0 ohms | | |
| Amperes | WL Form | Ohms | WL Form | Ohms | WL Form | Ohms | WL Form | Ohms | WL Form | Ohms | |
| 96.0 | WLRF2A1 | 0.049 | WLRF3A1 | 0.075 | WLRF4A1 | 0.1 | WLRF5A1 | 0.13 | | | |
| 86.0 | WLRF2A2 | 0.061 | WLRF3A2 | 0.094 | WLRF4A2 | 0.13 | WLRF5A2 | 0.16 | | | |
| 76.0 | WLRF2A3 | 0.079 | WLRF3A3 | 0.12 | WLRF4A3 | 0.16 | WLRF5A3 | 0.21 | | | |
| 68.0 | WLRF2A4 | 0.099 | WLRF3A4 | 0.15 | WLRF4A4 | 0.21 | WLRF5A4 | 0.26 | | | |
| 60.0 | WLRF2A5 | 0.13 | WLRF3A5 | 0.19 | WLRF4A5 | 0.26 | WLRF5A5 | 0.34 | | | |
| 54.0 | WLRF2A6 | 0.16 | WLRF3A6 | 0.24 | WLRF4A6 | 0.33 | WLRF5A6 | 0.42 | | | |
| 50.0 | WLRC2C1 | 0.18 | WLRC3C1 | 0.28 | WLRC4C1 | 0.40 | WLRC5C1 | 0.50 | | | |
| 45.0 | WLRC2C2 | 0.22 | WLRC3C2 | 0.35 | WLRC4C2 | 0.47 | WLRC5C2 | 0.60 | | | |
| 42.0 | WLRC2C3 | 0.25 | WLRC3C3 | 0.40 | WLRC4C3 | 0.55 | WLRC5C3 | 0.70 | | | |
| 36.0 | WLRC2C4 | 0.33 | WLRC3C4 | 0.52 | WLRC4C4 | 0.70 | WLRC5C4 | 0.90 | | | |
| 32.0 | WLRC2C5 | 0.42 | WLRC3C5 | 0.67 | WLRC4C5 | 0.90 | WLRC5C5 | 1.2 | | | |
| 29.0 | WLRC2C6 | 0.54 | WLRC3C6 | 0.85 | WLRC4C6 | 1.2 | WLRC5C6 | 1.5 | | | |
| 25.0 | WLRC2C7 | 0.70 | WLRC3C7 | 1.1 | WLRC4C7 | 1.5 | WLRC5C7 | 1.9 | | | |
| 17.8 | WLRB2E4 | 0.84 | WLRB3E4 | 1.3 | WLRB4E4 | 1.8 | WLRB5E4 | 2.2 | | | |
| 15.8 | WLRB2E5 | 1.1 | WLRB3E5 | 1.6 | WLRB4E5 | 2.2 | WLRB5E5 | 2.8 | | | |
| 14.1 | WLRB2E6 | 1.3 | WLRB3E6 | 2.1 | WLRB4E6 | 2.8 | WLRB5E6 | 3.5 | | | |
| 12.7 | WLRB2E7 | 1.7 | WLRB3E7 | 2.6 | WLRB4E7 | 3.5 | WLRB5E7 | 4.5 | | | |
| 11.5 | WLRB2E8 | 2.1 | WLRB3E8 | 3.2 | WLRB4E8 | 4.3 | WLRB5E8 | 5.4 | | | |
| 10.3 | WLRB2E9 | 2.6 | WLRB3E9 | 4.0 | WLRB4E9 | 5.4 | WLRB5E9 | 6.8 | | | |
| 9.2 | WLRB2F1 | 3.2 | WLRB3F1 | 5.0 | WLRB4F1 | 6.7 | WLRB5F1 | 8.5 | | | |
| 8.2 | WLRB2F2 | 4.0 | WLRB3F2 | 6.2 | WLRB4F2 | 8.5 | WLRB5F2 | 11.0 | | | |
| 7.3 | WLRB2F3 | 5.1 | WLRB3F3 | 7.9 | WLRB4F3 | 11.0 | WLRB5F3 | 13.0 | | | |
| 6.5 | WLRB2F4 | 6.4 | WLRB3F4 | 10.0 | WLRB4F4 | 13.0 | WLRB5F4 | 17.0 | | | |

NEMA DUTY CYCLE RATING - TABLE 1

Duty cycle rating based on NEMA class will allow an economical selection of Edgeohm and Hexohm resistors to meet a variety of motor starting and running applications. These current values will limit the temperature rise of the resistor to 375°C rise above a 40°C ambient, when used in accordance with the corresponding duty cycle. To apply these ratings, select the duty cycle from Table 1 that most closely fits your requirement. Multiply the corresponding current factor by the maximum continuous current that will be encountered. Select a resistor with a continuous duty current that meets or exceeds the product just calculated. This will allow proper resistor selection.

| Seconds On | Seconds Off | Current Factor | NEMA Class |
|------------|-------------|----------------|------------|
| 5 | 75 | 0.30 | 111-116 |
| 10 | 70 | 0.40 | 131-136 |
| 15 | 75 | 0.48 | 141-146 |
| 15 | 45 | 0.56 | 151-156 |
| 15 | 30 | 0.64 | 161-166 |
| 15 | 15 | 0.73 | 171-176 |

TEMPERATURE RISE - TABLE 3

When the operational temperature of Edgeohm and Hexohm resistors (375°C) can cause damage to adjacent equipment, the resistor temperature rise must be limited to a safe value. Select the maximum temperature rise that can be tolerated then multiply the corresponding current factor in Table 3 by the maximum current expected in the application. This will yield the proper continuous current rating of the resistor to be used.

| Temperature Rise | Current Factor |
|------------------|----------------|
| 50 | 3.8 |
| 100 | 2.7 |
| 150 | 2.0 |
| 200 | 1.75 |
| 250 | 1.4 |
| 300 | 1.25 |
| 350 | 1.1 |
| 415 | 1.0 |

THE ONE MINUTE READING - TABLE 2

When full rated current is applied to the resistor for one minute or less the temperature rise will be limited to 375°C. However, a minimum of 30 minutes must be allowed between current applications to allow the resistor to cool. For economical selection, Table 2 can be used to select the proper current rating. To apply the one minute rating select the seconds-on that closest matches your application. Then multiply the corresponding current factor by the maximum current expected. This will allow proper resistor selection.

| Seconds On | Minutes Off | Current Factor |
|------------|-------------|----------------|
| 10 | 30 | 0.28 |
| 20 | 30 | 0.38 |
| 30 | 30 | 0.45 |
| 40 | 30 | 0.50 |
| 50 | 30 | 0.55 |

GROUP MOUNTING - TABLE 4

When resistors are mounted in close proximity of each other, the heat transmitted from each resistor will affect adjacent resistors effectively raising the ambient temperature. In this case maximum power must be derated. Multiply the listed maximum power rating of the resistor by the derating factor in Table 4 corresponding to the expected ambient temperature. Table 4 can also be used for single resistors in ambient temperatures above 40°C.

| Ambient Temperature | Derating Factor |
|---------------------|-----------------|
| 50°C | 0.9 |
| 80°C | 0.8 |
| 100°C | 0.7 |