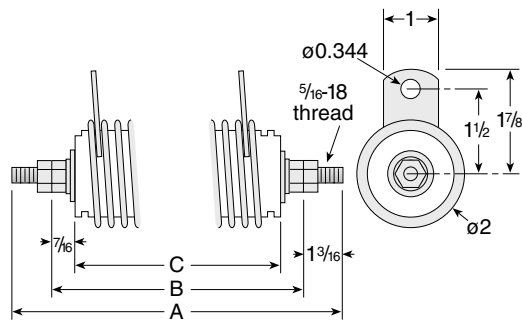


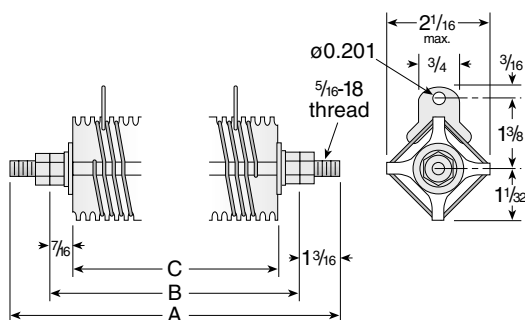
Edgeohm & Hexohm Helical Wound

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.

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

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 (starting with WLRB and WLRC, ex. WLRB3E7 and WLRC5C1). Contact Ohmite for information on stackable rack mounted resistor banks and enclosers.

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 WLR4A5Z).

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

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

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

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

EDGEOHM AND HEXOHM POWER RESISTORS

Length 2				Length 3			
Watt. Rating: 280 - 440 watts				Wattage Rating: 425 - 700 watts			
Amp. Range: 6.5 - 96.0 amps				Ampere Range: 6.5 - 96.0 amps			
Res. Range: 0.049 - 6.4 ohms				Resistance Range: 0.075 - 10.0 ohms			
Taps	0	3		0	5	5	9
Spacing	1/4			1/6	1/10	1/10	1/10
Amps	Ohms			Ohms			
96	0.049	WLRF2A1	WLRF2U1	0.075	WLRF3A1	WLRF3U1	
86	0.061	WLRF2A2	WLRF2U2	0.094	WLRF3A2	WLRF3U2	
76	0.079	WLRF2A3	WLRF2U3	0.12	WLRF3A3	WLRF3U4	
68	0.099	WLRF2A4	WLRF2U4	0.15	WLRF3A4	WLRF3U5	
60	0.13	WLRF2A5	WLRF2U5	0.19	WLRF3A5	WLRF3U6	
54	0.16	WLRF2A6	WLRF2U6	0.24	WLRF3A6	WLR3U7	
50	0.18	WLRC2C1	WLRC2U7	0.28	WLRC3C1	WLRC3U8	
45	0.22	WLRC2C2	WLRC2U8	0.35	WLRC3C2	WLRC3U9	
42	0.25	WLRC2C3	WLRC2U9	0.4	WLRC3C3	WLRC3V1	
36	0.33	WLRC2C4	WLRC2V1	0.52	WLRC3C4	WLRC3V2	
32	0.42	WLRC2C5	WLRC2V2	0.67	WLRC3C5	WLRC3V2	
29	0.54	WLRC2C6	WLRC2V3	0.85	WLRC3C6	WLRC3V3	
25	0.7	WLRC2C7	WLRC2V4	1.1	WLRC3C7	WLRC3V4	
17.8	0.84	WLRB2E4	WLRB2V5	1.3	WLRB3E4	WLRB3F5	WLRB3G6
15.8	1.1	WLRB2E5	WLRB2V6	1.6	WLRB3E5	WLRB3F6	WLRB3G7
14.1	1.3	WLRB2E6	WLRB2V7	2.1	WLRB3E6	WLRB3F7	WLRB3G8
12.7	1.7	WLRB2E7	WLRB2V8	2.6	WLRB3E7	WLRB3F8	WLRB3G9
11.5	2.1	WLRB2E8	WLRB2V9	3.2	WLRB3E8	WLRB3F9	WLRB3H1
10.3	2.6	WLRB2E9	WLRB2W1	4	WLRB3E9	WLRB3G1	WLRB3H2
9.2	3.2	WLRB2F1	WLRB2W2	5	WLRB3F1	WLRB3G2	WLRB3H3
8.2	4	WLRB2F2	WLRB2W3	6.2	WLRB3F2	WLRB3G3	WLRB3H4
7.3	5.1	WLRB2F3	WLRB2W4	7.9	WLRB3F3	WLRB3G4	WLRB3H5
6.5	6.4	WLRB2F4	WLRB2W5	10	WLRB3F4	WLRB3G5	WLRB3H6

Length 4					Length 5				
Wattage Rating: 600 - 950 watts					Wattage Rating: 750 - 1220 watts				
Ampere Range: 6.5 - 96 amps					Ampere Range: 6.5 - 96 amps				
Resistance Range: 0.1 - 13 ohms					Resistance Range: 0.13 - 17.0 ohms				
Taps	0	4	7	5	9	0	5	9	
Spacing	1/8		1/8	1/10	1/10	1/10		1/10	
Amps	Ohms				Ohms				
96	0.1	WLRF4A1	WLRF4U1	WLRF4U7	0.13	WLRF5A1	WLRF5A7	WLRF5B4	
86	0.13	WLRF4A2	WLRF4U2	WLRF4U8	0.16	WLRF5A2	WLRF5A8	WLRF5B5	
76	0.16	WLRF4A3	WLRF4U3	WLRF4U9	0.21	WLRF5A3	WLRF5A9	WLRF5B6	
68	0.21	WLRF4A4	WLRF4U4	WLRF4V1	0.26	WLRF5A4	WLRF5B1	WLRF5B7	
60	0.26	WLRF4A5	WLRF4U5	WLRF4V2	0.34	WLRF5A5	WLRF5B2	WLRF5B8	
54	0.33	WLRF4A6	WLRF4U6	WLRF4V3	0.42	WLRF5A6	WLRF5B3	WLRF5B9	
50	0.4	WLRC4C1		WLRC4C8	WLC4D6	0.5	WLRC5C1	WLRC5C8	WLRC5D6
45	0.47	WLRC4C2		WLRC4C9	WLC4D7	0.6	WLRC5C2	WLRC5C9	WLRC5D7
42	0.55	WLRC4C3		WLRC4D1	WLC4D8	0.7	WLRC5C3	WLRC5D1	WLRC5D8
36	0.7	WLRC4C4		WLRC4D2	WLC4D9	0.9	WLRC5C4	WLRC5D2	WLRC5D9
32	0.9	WLRC4C5		WLRC4D3	WLC4E1	1.2	WLRC5C5	WLRC5D3	WLRC5E1
29	1.2	WLRC4C6		WLRC4D4	WLC4E2	1.5	WLRC5C6	WLRC5D4	WLRC5E2
25	1.5	WLRC4C7		WLRC4D5	WLC4E3	1.9	WLRC5C7	WLRC5D5	WLRC5E3
17.8	1.8	WLRB4E4		WLRB4F5	WLRB4G6	2.2	WLRB5E4	WLRB5F5	WLRB5G6
15.8	2.2	WLRB4E5		WLRB4F6	WLRB4G7	2.8	WLRB5E5	WLRB5F6	WLRB5G7
14.1	2.8	WLRB4E6		WLRB4F7	WLRB4G8	3.5	WLRB5E6	WLRB5F7	WLRB5G8
12.7	3.5	WLRB4E7		WLRB4F8	WLRB4G9	4.5	WLRB5E7	WLRB5F8	WLRB5G9
11.5	4.3	WLRB4E8		WLRB4F9	WLRB4H1	5.4	WLRB5E8	WLRB5F9	WLRB5H1
10.3	5.4	WLRB4E9		WLRB4G1	WLRB4H2	6.8	WLRB5E9	WLRB5G1	WLRB5H2
9.2	6.7	WLRB4F1		WLRB4G2	WLRB4H3	8.5	WLRB5F1	WLRB5G2	WLRB5H3
8.2	8.5	WLRB4F2		WLRB4G3	WLRB4H4	11	WLRB5F2	WLRB5G3	WLRB5H4
7.3	11	WLRB4F3		WLRB4G4	WLRB4H5	13	WLRB5F3	WLRB5G4	WLRB5H5
6.5	13	WLRB4F4		WLRB4G5	WLRB4H6	17	WLRB5F4	WLRB5G5	WLRB5H6