

# 270 Series

## Vitreous Enamel Power



Select 270 Type fixed resistors for applications requiring wattage ratings from 12 to 1000 watts. The 270 Type resistors are equipped with lug terminals suitable for soldering or sturdy bolt connection. When secure mounting is required, the hollow core of these resistors permit fastening with spring-type brackets, thru bolts or thru bolts with slotted-steel brackets.

Suitable for rugged applications, the 270 Type resistors feature all-welded construction and durable lead free vitreous enamel coating. Mounting brackets not included with resistors.

### FEATURES

- Terminals suitable for soldering or bolt connection
- High wattage applications
- Rugged lead free vitreous enamel coating
- Flame resistant coating
- All-welded construction
- RoHS compliant available
- “Fast on” option – see terminal 538, <https://www.ohmite.com/assets/docs/terminals.pdf>

### SERIES SPECIFICATIONS

Series	Wattage	Ohms	Core Code	Voltage	Std. Terminal
L12	12	0.1-51K	D	565	57
L25	25	0.15-100K	K	625	40
L50	50	0.38-260K	K	1625	40
L100	100	0.23-101K	M	2845	40
L175	175	0.13-101K	P	3595	46
L225	225	0.16-129K	P	4595	46
L500	500	0.38-218K	S	4970	45
L1000	1000	0.69-392K	S	8900	45

Non-Inductive versions available; Other sizes available; Also available in low cost Centohm or Silicone coating; Consult Ohmite.

\* Maximum Voltage is based on Ohm's Law  $[V=\sqrt{P \cdot R}]$  as limited by the resistance value of specified product

### CHARACTERISTICS

<b>Coating</b>	Lead free vitreous enamel. Large models (500 watts and up) are supplied in Silicone Ceramic. Also available in low-cost Centohm coating; Consult factory.										
<b>Core</b>	Tubular ceramic.										
<b>Terminals</b>	Solder coated radial lug. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu										
<b>Derating</b>	Linearly from 100% @ +25°C to 0% @ +350°C.										
<b>Tolerance</b>	±5% 1Ω and over (J); ±10% under 1Ω (K)										
<b>Power rating</b>	Based on 25°C free air rating.										
<b>Overload</b>	10 times rated wattage for 5 seconds.										
<b>Temperature coefficient</b>	1 to 20Ω: ±400 ppm/°C; Above 20Ω: ±260 ppm/°C										
<b>Dielectric withstanding voltage</b>	1000 VAC: 12 to 100 watt rating. 3000 VAC: 175 to 225 watt rating (Measured from terminal to mounting bracket)										
<b>Max. amps</b>	use the formula $\sqrt{P/R}$										
<b>Power limitations for high resistance values</b>	When resistance exceeds the resistance values listed, derate the Power Rating by 25% to improve reliability. <i>No power derating necessary for ratings higher than 100W.</i>										
	<table border="1"> <thead> <tr> <th>Power rating</th> <th>Resistance value</th> </tr> </thead> <tbody> <tr> <td>12W</td> <td>3,900Ω</td> </tr> <tr> <td>25W</td> <td>12,000Ω</td> </tr> <tr> <td>50W</td> <td>35,000Ω</td> </tr> <tr> <td>100W</td> <td>75,000Ω</td> </tr> </tbody> </table>	Power rating	Resistance value	12W	3,900Ω	25W	12,000Ω	50W	35,000Ω	100W	75,000Ω
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<b>Mounting Hardware</b>	see <a href="https://www.ohmite.com/assets/docs/hardware_resistor.pdf">https://www.ohmite.com/assets/docs/hardware_resistor.pdf</a>										

(continued)

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### DIMENSIONS

in./mm



Series	Wattage	L		D		C	Core Code*	Std. Term.**
L12	12	1.75	44.4	0.313	7.94	0.188 / 4.76	D	57
L25	25	2.0	50.8	0.562	14.3	0.313 / 7.94	K	40
L50	50	4.0	101.6	0.562	14.3	0.313 / 7.94	K	40
L100	100	6.5	165.1	0.750	19.1	0.50 / 12.7	M	40
L175	175	8.5	215.9	1.125	28.6	0.75 / 19.1	P	46
L225	225	10.5	266.7	1.125	28.6	0.75 / 19.1	P	46
L500	500	12.0	304.8	2.50	63.5	1.75 / 44.5	S	45
L1000	1000	20.0	508.0	2.50	63.5	1.75 / 44.5	S	45

\* <https://www.ohmite.com/assets/docs/200-210-270-custom.pdf>

\*\* <https://www.ohmite.com/assets/docs/terminals.pdf>

### ORDERING INFORMATION

#### Standard



#### Made-to-order



See website for custom core and terminal info

#### Standard part numbers for 270 series

Ohmic value	Wattage		Part No. Prefix Suffix	Wattage		Part No. Prefix Suffix	Wattage			
	12 Watt	12 Watt		25	50		100	175	225	500
0.51	✓	L12JKR51E	1	1R0E	✓	✓	2,500	2K5E	✓	✓
1	✓	L12J1R0E	2	2R0E	✓	✓	3,000	3K0E	✓	✓
3.3	✓	L12J3R3E	3	3R0E	✓	✓	3,500	3K5E	✓	✓
4.7	✓	L12J4R7E	4	4R0E	✓	✓	4,000	4K0E	✓	✓
10	✓	L12J10RE	5	5R0E	✓	✓	5,000	5K0E	✓	✓
12	✓	L12J12RE	10	10RE	✓	✓	6,000	6K0E	✓	✓
15	✓	L12J15RE	15	15RE	✓	✓	7,500	7K5E	✓	✓
22	✓	L12J22RE	25	25RE	✓	✓	10,000	10KE	✓	✓
27	✓	L12J27RE	50	50RE	✓	✓	12,000	12KE	✓	✓
33	✓	L12J33RE	75	75RE	✓	✓	15,000	15KE	✓	✓
47	✓	L12J47RE	100	100E	✓	✓	20,000	20KE	✓	✓
68	✓	L12J68RE	125	125E	✓	✓	25,000	25KE	✓	✓
82	✓	L12J82RE	150	150E	✓	✓	30,000	30KE	✓	✓
100	✓	L12J100E	200	200E	✓	✓	35,000	35KE	✓	✓
150	✓	L12J150E	250	250E	✓	✓	40,000	40KE	✓	✓
		51000	500	500E	✓	✓	50,000	50KE	✓	✓
			750	750E	✓	✓	60,000	60KE	✓	✓
			800	800E	✓	✓	75,000	75KE	✓	✓
			1,000	1K0E	✓	✓	100,000	100KE	✓	✓
			1,500	1K5E	✓	✓	150,000	150KE	✓	✓
			2,000	2K0E	✓	✓	200,000	200KE	✓	✓
							250,000	250KE	✓	✓

✓ = Standard values; check availability using the worldwide inventory search at [www.ohmite.com](http://www.ohmite.com)

Red outlined values supplied in Silicone-Ceramic coatings instead of vitreous enamel.