

# 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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25W	12,000Ω										
50W	35,000Ω										
100W	75,000Ω										
<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

F = Fast on (optional)  
 Non-inductive Blank = Standard N = Non-inductive  
 RoHS Compliant

**L 25 J 1 0 0 E**

Coating: Blank = Vitreous, C = Centohm, S = Silicone  
 Series: L  
 Wattage: 25  
 Tolerance: J = 5%, K = 10%  
 Ohms: 1R0 = 1Ω, 250 = 250Ω, 1K0 = 1,000Ω, 25K = 25,000Ω, 25K5 = 25,500Ω

#### Made-to-order

Non-inductive Blank = Standard N = Non-inductive  
 Core Diameter See "Core and Terminal Selection"  
 RoHS Compliant

**2 7 0 5 0 K 4 0 5 R 0 0 J E**

Coating: 270 = Vitreous, 470 = Silicone Ceramic  
 Wattage: 50  
 Ohms: R500 = 0.500Ω, 1R00 = 1Ω, 250R = 250Ω, 1K00 = 1,000Ω, 25K0 = 25,000Ω, 25K5 = 25,500Ω  
 Terminal Type: See "Resistor Terminals for Tubular Cores"

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
0.51	✓	L12JKR51E	L25J	L50J	L100J	L175J	L225J	L500J	L1000J
1	✓	L12J1R0E	✓	✓	✓	✓	✓	✓	✓
3.3	✓	L12J3R3E	✓	✓	✓	✓	✓	✓	✓
4.7	✓	L12J4R7E	✓	✓	✓	✓	✓	✓	✓
10	✓	L12J10RE	✓	✓	✓	✓	✓	✓	✓
12	✓	L12J12RE	✓	✓	✓	✓	✓	✓	✓
15	✓	L12J15RE	✓	✓	✓	✓	✓	✓	✓
22	✓	L12J22RE	✓	✓	✓	✓	✓	✓	✓
27	✓	L12J27RE	✓	✓	✓	✓	✓	✓	✓
33	✓	L12J33RE	✓	✓	✓	✓	✓	✓	✓
47	✓	L12J47RE	✓	✓	✓	✓	✓	✓	✓
68	✓	L12J68RE	✓	✓	✓	✓	✓	✓	✓
82	✓	L12J82RE	✓	✓	✓	✓	✓	✓	✓
100	✓	L12J100E	✓	✓	✓	✓	✓	✓	✓
150	✓	L12J150E	✓	✓	✓	✓	✓	✓	✓
		51000	✓	✓	✓	✓	✓	✓	✓
		180	✓	✓	✓	✓	✓	✓	✓
		270	✓	✓	✓	✓	✓	✓	✓
		330	✓	✓	✓	✓	✓	✓	✓
		390	✓	✓	✓	✓	✓	✓	✓
		470	✓	✓	✓	✓	✓	✓	✓
		560	✓	✓	✓	✓	✓	✓	✓
		1000	✓	✓	✓	✓	✓	✓	✓
		1200	✓	✓	✓	✓	✓	✓	✓
		1500	✓	✓	✓	✓	✓	✓	✓
		2200	✓	✓	✓	✓	✓	✓	✓
		2700	✓	✓	✓	✓	✓	✓	✓
		4700	✓	✓	✓	✓	✓	✓	✓
		10000	✓	✓	✓	✓	✓	✓	✓
		18000	✓	✓	✓	✓	✓	✓	✓
		22000	✓	✓	✓	✓	✓	✓	✓
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		390	✓	✓	✓	✓	✓	✓	✓
		470	✓	✓	✓	✓	✓	✓	✓
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		51000	✓	✓	✓	✓	✓	✓	✓
		180	✓	✓	✓	✓	✓	✓	✓
		270	✓	✓	✓	✓	✓	✓	✓
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		1000	✓	✓	✓	✓	✓	✓	✓
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✓ = 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.