

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 $[V=\sqrt{P \times R}]$ as limited by the resistance value of specified product

CHARACTERISTICS

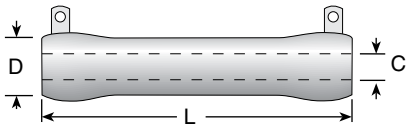
Coating	Lead free vitreous enamel. Large models (500 watts and up) are supplied in Silicone Ceramic. Also available in low-cost Centohm coating; Consult factory.										
Core	Tubular ceramic.										
Terminals	Solder coated radial lug. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu										
Derating	Linearly from 100% @ +25°C to 0% @ +350°C.										
Tolerance	±5% 1Ω and over (J); ±10% under 1Ω (K)										
Power rating	Based on 25°C free air rating.										
Overload	10 times rated wattage for 5 seconds.										
Temperature coefficient	1 to 20Ω: ±400 ppm/°C; Above 20Ω: ±260 ppm/°C										
Dielectric withstanding voltage	1000 VAC: 12 to 100 watt rating. 3000 VAC: 175 to 225 watt rating (Measured from terminal to mounting bracket)										
Max. amps	use the formula $\sqrt{P/R}$										
Power limitations for high resistance values	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> <tr> <th>Power rating</th><th>Resistance value</th></tr> <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> </table>	Power rating	Resistance value	12W	3,900Ω	25W	12,000Ω	50W	35,000Ω	100W	75,000Ω
Power rating	Resistance value										
12W	3,900Ω										
25W	12,000Ω										
50W	35,000Ω										
100W	75,000Ω										
Mounting Hardware	see https://www.ohmite.com/assets/docs/hardware_resistor.pdf										

(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** **RoHS Compliant**
Blank = Standard
N = Non-inductive

L 2 5 J 1 0 0 E

Series **Wattage** **Tolerance** **Ohms**

Coating **J = 5%** **1R0 = 1Ω**
Blank = Vitreous **K = 10%** **250 = 250Ω**
C = Centohm **1K0 = 1,000Ω**
S = Silicone **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	70	50	K40	5R00	J E
Coating 270 = Vitreous 470 = Silicone Ceramic		Wattage		Ohms R500 = 0.500Ω 1R00 = 1Ω 250R = 250Ω 1K00 = 1,000Ω 25K0 = 25,000Ω 25K5 = 25,500Ω	Tolerance J = 5% K = 10%
Terminal Type See "Resistor Terminals for Tubular Cores"					

**See website for
custom core and
terminal info**

Standard part numbers for 270 series

Ohmic value			12 Watt			Ohmic value			12 Watt			Wattage										Wattage									
Ohmic value						Ohmic value						Ohmic value	Part No.	25	50	100	175	225	500	1000	Ohmic value	Part No.	25	50	100	175	225	500	1000		
													Prefix	Suffix									Prefix	Suffix							
0.51	✓	L12JKR51E				180	✓		L12J180E			1	—1R0E	✓	✓	✓	✓	✓				2,500	—2K5E	✓	✓	✓		✓			
1	✓	L12J1R0E				270	✓		L12J270E			2	—2R0E	✓	✓	✓	✓	✓				3,000	—3K0E	✓	✓	✓	✓	✓			
3.3	✓	L12J3R3E				330	✓		L12J330E			3	—3R0E	✓	✓	✓	✓	✓				3,500	—3K5E	✓							
4.7	✓	L12J4R7E				390	✓		L12J390E			4	—4R0E	✓	✓	✓	✓	✓				4,000	—4K0E	✓	✓						
10	✓	L12J10RE				470	✓		L12J470E			5	—5R0E	✓	✓	✓	✓	✓				5,000	—5K0E	✓	✓	✓	✓	✓			
12	✓	L12J12RE				560	✓		L12J560E			10	—10RE	✓	✓	✓	✓	✓				6,000	—6K0E	✓							
15	✓	L12J15RE				1000	✓		L12J1K0E			15	—15RE	✓		✓	✓	✓				7,500	—7K5E	✓	✓	✓		✓			
22	✓	L12J22RE				1200	✓		L12J1K2E			25	—25RE	✓	✓	✓	✓	✓				10,000	—10KE	✓	✓	✓	✓	✓			
27	✓	L12J27RE				1500	✓		L12J1K5E			50	—50RE	✓	✓	✓	✓	✓				12,000	—12KE	✓							
33	✓	L12J33RE				2200	✓		L12J2K2E			75	—75RE	✓	✓	✓	✓	✓				15,000	—15KE	✓	✓			✓			
47	✓	L12J47RE				2700	✓		L12J2K7E			100	—100E	✓	✓	✓	✓	✓				20,000	—20KE	✓	✓	✓		✓			
68	✓	L12J68RE				4700	✓		L12J4K7E			125	—125E			✓	✓					25,000	—25KE	✓	✓			✓			
82	✓	L12J82RE				10000	✓		L12J10KE			150	—150E	✓	✓	✓	✓	✓				30,000	—30KE			✓		✓			
100	✓	L12J100E				18000	✓		L12J18KE			200	—200E	✓	✓							35,000	—35KE		✓			✓			
150	✓	L12J150E				22000	✓		L12J22KE			250	—250E	✓	✓	✓	✓	✓				40,000	—40KE	✓				✓			
						51000	✓		L12J51KE			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

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