

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, <http://www.ohmite.com/techdata/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
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12W	3,900Ω										
25W	12,000Ω										
50W	35,000Ω										
100W	75,000Ω										
Mounting Hardware	see http://www.ohmite.com/techdata/lug-mounting.php										

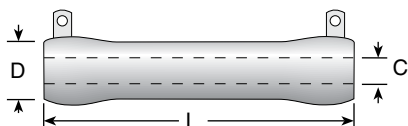
(continued)

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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

* <http://www.ohmite.com/techdata/200-210-270-custom.pdf>

** <http://www.ohmite.com/techdata/terminals.pdf>

ORDERING INFORMATION

Standard

F = Fast on (optional)	Non-inductive Blank = Standard N = Non-inductive	RoHS Compliant
L	25	J 100 E
Coating Blank = Vitreous C = Centohm S = Silicone	Series Wattage	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
270	50	K 405 R 00 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
	Terminal Type See "Resistor Terminals for Tubular Cores"	Tolerance J = 5% K = 10%

See website for custom core and terminal info

Standard part numbers for 270 series

Ohmic value		Wattage		Ohmic value		Wattage	
12 Watt		12 Watt		12 Watt		12 Watt	
0.51 ✓	L12JKR51E	180 ✓	L12J180E	1	L12J1R0E	2,500	L25J2K5E
1 ✓	L12J1R0E	270 ✓	L12J270E	2	L12J2R0E	3,000	L30J3K0E
3.3 ✓	L12J3R3E	330 ✓	L12J330E	3	L12J3R0E	3,500	L35J3K5E
4.7 ✓	L12J4R7E	390 ✓	L12J390E	4	L12J4R0E	4,000	L40J4K0E
10 ✓	L12J10R0E	470 ✓	L12J470E	5	L12J5R0E	5,000	L50J5K0E
12 ✓	L12J12R0E	560 ✓	L12J560E	10	L12J10R0E	6,000	L60J6K0E
15 ✓	L12J15R0E	1000 ✓	L12J1K0E	15	L12J15R0E	7,500	L75J7K5E
22 ✓	L12J22R0E	1200 ✓	L12J1K2E	25	L12J25R0E	10,000	L10K10K0E
27 ✓	L12J27R0E	1500 ✓	L12J1K5E	50	L12J50R0E	12,000	L12K12K0E
33 ✓	L12J33R0E	2200 ✓	L12J2K2E	75	L12J75R0E	15,000	L15K15K0E
47 ✓	L12J47R0E	2700 ✓	L12J2K7E	100	L12J100R0E	20,000	L20K20K0E
68 ✓	L12J68R0E	4700 ✓	L12J4K7E	125	L12J125R0E	25,000	L25K25K0E
82 ✓	L12J82R0E	10000 ✓	L12J10KE	150	L12J150R0E	30,000	L30K30K0E
100 ✓	L12J100R0E	18000 ✓	L12J18KE	200	L12J200R0E	35,000	L35K35K0E
150 ✓	L12J150R0E	22000 ✓	L12J22KE	250	L12J250R0E	40,000	L40K40K0E
		51000 ✓	L12J51KE	500	L12J500R0E	50,000	L50K50K0E
				750	L12J750R0E	60,000	L60K60K0E
				800	L12J800R0E	75,000	L75K75K0E
				1,000	L12J1K0E	100,000	L100K100K0E
				1,500	L12J1K5E	150,000	L150K150K0E
				2,000	L12J2K0E	200,000	L200K200K0E
						250,000	L250K250K0E

✓ = 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.