

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 [$V=\sqrt{P \cdot R}$] 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 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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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	44.4	0.313 / 7.94	7.94	0.188 / 4.76	D	57
L25	25	2.0 / 50.8	50.8	0.562 / 14.3	14.3	0.313 / 7.94	K	40
L50	50	4.0 / 101.6	101.6	0.562 / 14.3	14.3	0.313 / 7.94	K	40
L100	100	6.5 / 165.1	165.1	0.750 / 19.1	19.1	0.50 / 12.7	M	40
L175	175	8.5 / 215.9	215.9	1.125 / 28.6	28.6	0.75 / 19.1	P	46
L225	225	10.5 / 266.7	266.7	1.125 / 28.6	28.6	0.75 / 19.1	P	46
L500	500	12.0 / 304.8	304.8	2.50 / 63.5	63.5	1.75 / 44.5	S	45
L1000	1000	20.0 / 508.0	508.0	2.50 / 63.5	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
Series	Wattage	Tolerance
Coating Blank = Vitreous C = Centohm S = Silicone		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	12 Watt		Ohmic value	12 Watt		Ohmic value	Wattage							Ohmic value	Wattage									
	Part No.	✓		Part No.	✓		Part No.	Prefix	25	50	100	175	225		500	1000	Part No.	25	50	100	175	225	500	1000
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.