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	Max. 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 [$V=\sqrt{P*R}$] as limited by the resistance value of specified product or the voltage limit stated, whichever is lower.

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. *No power derating necessary for ratings higher than 100W.*

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

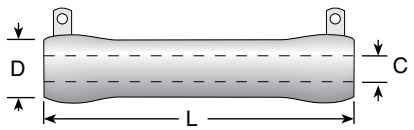
(continued)

270 Series

Vitreous Enamel Power

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 100 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

270 50K 405R00 JE

- Coating: 270 = Vitreous, 470 = Silicone Ceramic
- Wattage: 50
- Terminal Type: See "Resistor Terminals for Tubular Cores"
- Ohms: R500 = 0.500Ω, 1R00 = 1Ω, 250R = 250Ω, 1K00 = 1,000Ω, 25K0 = 25,000Ω, 25K5 = 25,500Ω
- Tolerance: J = 5%, K = 10%

See website for custom core and terminal info: http://www.ohmite.com/assets/docs/terminals.pdf

Standard part numbers for 270 series

Ohmic value		12 Watt	Ohmic value		12 Watt
0.51	✔	L12JKR51E	180	✔	L12J180E
1	✔	L12J1R0E	270	✔	L12J270E
3.3	✔	L12J3R3E	330	✔	L12J330E
4.7	✔	L12J4R7E	390	✔	L12J390E
10	✔	L12J10RE	470	✔	L12J470E
12	✔	L12J12RE	560	✔	L12J560E
15	✔	L12J15RE	1000	✔	L12J1K0E
22	✔	L12J22RE	1200	✔	L12J1K2E
27	✔	L12J27RE	1500	✔	L12J1K5E
33	✔	L12J33RE	2200	✔	L12J2K2E
47	✔	L12J47RE	2700	✔	L12J2K7E
68	✔	L12J68RE	4700	✔	L12J4K7E
82	✔	L12J82RE	10000	✔	L12J10KE
100	✔	L12J100E	18000	✔	L12J18KE
150	✔	L12J150E	22000	✔	L12J22KE
			51000	✔	L12J51KE

✔ = 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.

Ohmic value	Part No. Prefix ➤ / Suffix ▼	Wattage 25 (L25J)	50 (L50J)	100 (L100J)	175 (L175J)	225 (L225J)	500 (L500J)	1000 (L1000J)
1	---1R0E	✔	✔	✔	✔	✔		
2	---2R0E	✔	✔	✔	✔	✔		
3	---3R0E	✔	✔	✔	✔	✔		
4	---4R0E	✔	✔	✔	✔	✔		
5	---5R0E	✔	✔	✔	✔	✔		
10	---10RE	✔	✔	✔	✔	✔		
15	---15RE	✔						
25	---25RE	✔	✔	✔	✔	✔		
50	---50RE	✔	✔	✔	✔	✔		
75	---75RE	✔	✔	✔	✔	✔		
100	---100E	✔	✔	✔	✔	✔		
125	---125E			✔	✔			
150	---150E	✔	✔	✔	✔	✔		
200	---200E	✔	✔					
250	---250E	✔	✔	✔	✔	✔		
500	---500E	✔	✔	✔	✔	✔		
750	---750E	✔	✔	✔		✔		
800	---800E	✔	✔					
1,000	---1K0E	✔	✔	✔	✔	✔		
1,500	---1K5E	✔	✔	✔		✔		
2,000	---2K0E	✔	✔	✔	✔	✔		

Ohmic value	Part No. Prefix ➤ / Suffix ▼	Wattage 25 (L25J)	50 (L50J)	100 (L100J)	175 (L175J)	225 (L225J)	500 (L500J)	1000 (L1000J)
2,500	---2K5E	✔	✔	✔		✔		
3,000	---3K0E	✔	✔	✔	✔	✔		
3,500	---3K5E	✔						
4,000	---4K0E	✔	✔					
5,000	---5K0E	✔	✔	✔	✔	✔		
6,000	---6K0E	✔						
7,500	---7K5E	✔	✔	✔		✔		
10,000	---10KE	✔	✔	✔	✔	✔		
12,000	---12KE	✔						
15,000	---15KE	✔	✔	✔		✔		
20,000	---20KE	✔	✔	✔		✔		
25,000	---25KE	✔	✔			✔		
30,000	---30KE			✔		✔		
35,000	---35KE		✔					
40,000	---40KE	✔				✔		
50,000	---50KE	✔	✔	✔		✔		
60,000	---60KE					✔		
75,000	---75KE		✔		✔	✔		
100,000	---100KE	✔	✔	✔	✔	✔		
150,000	---150KE		✔					
200,000	---200KE		✔					
250,000	---250KE		✔					