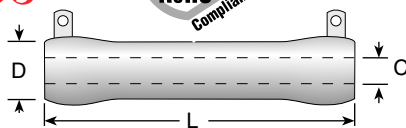


270 Series



Vitreous Enamel Power Resistors



Dimensions (in. / mm)

Series	Wattage	Ohms	L Length	D Diam.	C I. D. Core	Voltage
L12	12	0.1-51K	1.75 / 44.4	0.313 / 7.94	0.188 / 4.76	565
L25	25	0.15-100K	2.0 / 50.8	0.562 / 14.3	0.313 / 7.94	625
L50	50	0.38-260K	4.0 / 101.6	0.562 / 14.3	0.313 / 7.94	1625
L100	100	0.23-101K	6.5 / 165.1	0.750 / 19.1	0.50 / 12.7	2845
L175	175	0.13-101K	8.5 / 215.9	1.125 / 28.6	0.75 / 19.1	3595
L225	225	0.16-129K	10.5 / 266.7	1.125 / 28.6	0.75 / 19.1	4595
L500	500	0.38-218K	12.0 / 304.8	2.50 / 63.5	1.75 / 44.5	4970
L1000	1000	0.69-392K	20.0 / 508.0	2.50 / 63.5	1.75 / 44.5	8900

Non-Inductive versions available; Other sizes available; Also available in low cost Centohm coating; Consult Factory.

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 product available Jan. 2006 Add "E" suffix to part number to specify.

SPECIFICATIONS

Material

Coating: Lead free vitreous enamel.

Core: Tubular ceramic.

Terminals: Solder coated radial lug.

Derating: Linearly from 100% @ +25°C to 0% @ +350°C.

Electrical

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)

To calculate max. amps: use the formula $\sqrt{P/R}$

ORDERING INFO

Series	Wattage	Tolerance	Ohms
L	25	J	100
RoHS Compliant			
E			
F = 1%	1R0 = 1 Ω		
H = 3%	250 = 250 Ω		
J = 5%	1K0 = 1,000 Ω		
K = 10%	25K = 25,000 Ω		
	25K5 = 25,500 Ω		

MADE-TO-ORDER PARTS

Core Diameter See "Core and Terminal Selection"	Terminal Type See "Resistor Terminals for Tubular Cores"	RoHS Compliant
270	50K	405R00JE
Coating	Wattage	Ohms
270 = Vitreous	470 = Silicone Ceramic	R500 = 0.500 Ω
		1R00 = 1 Ω
		250R = 250 Ω
		1K00 = 1,000 Ω
		25K0 = 25,000 Ω
		25K5 = 25,500 Ω

See page 40 for custom core and terminal info

See page 34 for mounting hardware

Power limitations for high resistance values: When resistance exceeds the resistance values listed at right, derate the Power Rating by 25% to improve reliability:

Power rating	Resistance value	No power derating necessary for ratings higher than 100W.
12W	3,900Ω	
25W	12,000Ω	
50W	35,000Ω	
100W	75,000Ω	

STANDARD PART NUMBERS FOR STANDARD RESISTANCE VALUES

Ohmic value	12 Watt		Ohmic value	12 Watt		Wattage						Ohmic value	Wattage					
	Part No.	Prefix		Part No.	Prefix	Part No.	Prefix	Part No.	Prefix	Part No.	Prefix		Part No.	Prefix	Part No.	Prefix		
0.51	L12JKR51	✓	470	L12J470	✓	1	1R0	+	+	+	+	+	4,000	4K0	✓	✓	✓	✓
1	L12J1R0	✓	560	L12J560	✓	2	2R0	+	✓	+	✓	✓	5,000	5K0	+	✓	✓	✓
1.5	L12J1R5	✱	680	L12J680	✱	3	3R0	+	✓	✓	✓	✓	6,000	6K0	✓	✓	✓	✓
2.2	L12J2R2	✱	820	L12J820	✱	4	4R0	✓	✓	✓	✓	✓	7,500	7K5	✓	✓	✱	✓
3.3	L12J3R3	✓	1000	L12J1K0	✓	5	5R0	✓	+	+	+	+	8,000	8K0	✱	✓	✓	✓
4.7	L12J4R7	✓	1200	L12J1K2	✓	10	10R	+	+	+	+	+	10,000	10K	✓	✓	✓	✓
6.8	L12J6R8	✱	1500	L12J1K5	✓	15	15R	+	✓	✓	✓	✓	12,000	12K	✓	✱	✓	✓
10	L12J10R	✓	1800	L12J1K8	✱	25	25R	+	+	+	✓	+	15,000	15K	✓	✓	✓	✱
12	L12J12R	✓	2200	L12J2K2	✓	50	50R	+	+	+	✓	+	20,000	20K	✓	✓	✓	+
15	L12J15R	+	2700	L12J2K7	✓	75	75R	+	+	✓	✓	+	25,000	25K	✓	✓	✱	✓
18	L12J18R	✱	3300	L12J3K3	✱	100	100	+	+	+	✓	+	30,000	30K	✱	✓	✓	✓
22	L12J22R	✓	3900	L12J3K9	✱	125	125	✓	✓	✓	✓	+	35,000	35K	✱	✓	✓	✓
27	L12J27R	✓	4700	L12J4K7	✓	150	150	✓	✓	+	✓	+	40,000	40K	✓	✓	✱	✓
33	L12J33R	✓	5600	L12J5K6	✱	200	200	✓	✓	✓	✓	+	50,000	50K	✓	✓	+	✱
39	L12J39R	✱	6800	L12J6K8	✱	250	250	✓	+	+	✓	+	60,000	60K	✓	✓	✱	✓
47	L12J47R	✓	8200	L12J8K2	✱	500	500	✓	+	+	✓	+	70,000	70K	✱	✓	✓	✓
56	L12J56R	✱	10000	L12J10K	✓	750	750	✓	✓	✓	+	+	75,000	75K	✓	✱	✓	✓
68	L12J68R	✓	12000	L12J12K	✱	800	800	✓	✓	✓	+	+	80,000	80K	✱	✓	✓	✓
82	L12J82R	✓	15000	L12J15K	✓	1,000	1K0	+	+	+	✓	+	100,000	100K	✓	+	+	✱
100	L12J100	✓	18000	L12J18K	✓	1,500	1K5	✓	✓	✓	✓	+	125,000	125K	✱	✓	✓	✓
120	L12J120	✱	22000	L12J22K	✓	2,000	2K0	+	+	✓	✓	+	150,000	150K	✓	✓	✓	✓
150	L12J150	✓	27000	L12J27K	✱	2,500	2K5	✓	✓	✓	✓	+	175,000	175K	✓	✓	✓	✓
180	L12J180	✓	33000	L12J33K	✱	3,000	3K0	✓	✓	✓	✓	+	200,000	200K	✓	✓	✓	✓
220	L12J220	✱	39000	L12J39K	✱	3,500	3K5	+	✓	✓	✓	+	250,000	250K	✓	✓	✓	✓
270	L12J270	✓	47000	L12J47K	✱													
330	L12J330	✓	51000	L12J51K	✓													
390	L12J390	✓																

- ✱ = Most popular Standard values
- ✓ = Standard values
- ✱ = Non-Standard values subject to minimum handling charge per item

Shaded values involve very fine resistance wire and should not be used in critical applications without burn-in and/or thermal cycling.
Red outlined values supplied in Silicone-Ceramic coatings instead of vitreous enamel.