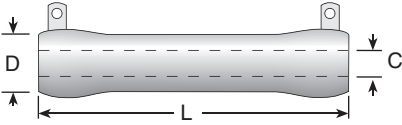


270 Series

Vitreous Enamel Power Resistors



Series	Wattage	Ohms	Dimensions (in. / mm)			Core Voltage
			L Length	D Diam.	C I. D. Core	
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. Consult factory.
Also available in low cost Centohm coating. Consult Factory.

Power limitations for high resistance values:	Power rating	Resistance value
When resistance exceeds the resistance values listed at right, derate the Power Rating by 25% to improve reliability:	12W	3,900Ω
	25W	12,000Ω
	50W	35,000Ω
	100W	75,000Ω

No power derating necessary for ratings higher than 100 watts.

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 $\sqrt{P/R}$

See page 34 for mounting hardware

STOCK PART NUMBERS FOR STANDARD RESISTANCE VALUES

Ohmic value	12 Watt	Ohmic value	12 Watt	Wattage						Ohmic value	Part No. Prefix Suffix	Wattage					
				25	50	100	175	225	500			1000	25	50	100	175	225
0.51	✓ L12JKR51	470	✓ L12J470							4,000	— 4K0	✓	✓	✓	✓	✓	✓
1	✓ L12J1R0	560	✓ L12J560							5,000	— 5K0	+	✓	✓	✓	✓	✓
1.5	✱ L12J1R5	680	✱ L12J680							6,000	— 6K0	✓	✓	✓	✓	✓	✓
2.2	✱ L12J2R2	820	✱ L12J820							7,500	— 7K5	✓	✓	✓	✱	✓	✓
3.3	✓ L12J3R3	1000	✓ L12J1K0							8,000	— 8K0	✱	✓	✓	✓	✓	✓
4.7	✓ L12J4R7	1200	✓ L12J1K2							10,000	— 10K	✓	✓	✓	✓	✓	✓
6.8	✱ L12J6R8	1500	✓ L12J1K5							12,000	— 12K	✓	✱	✓	✓	✓	✓
10	✓ L12J10R	1800	✱ L12J1K8							15,000	— 15K	✓	✓	✓	✱	✓	✓
12	✓ L12J12R	2200	✓ L12J2K2							20,000	— 20K	✓	✓	✓	✓	✱	+
15	✱ L12J15R	2700	✓ L12J2K7							25,000	— 25K	✓	✓	✓	✱	✓	✓
18	✱ L12J18R	3300	✱ L12J3K3							30,000	— 30K	✱	✓	✓	✓	✓	✓
22	✓ L12J22R	3900	✱ L12J3K9							35,000	— 35K	✱	✓	✓	✓	✓	✓
27	✓ L12J27R	4700	✓ L12J4K7							40,000	— 40K	✓	✓	✱	✱	✓	✓
33	✓ L12J33R	5600	✓ L12J5K6							50,000	— 50K	✓	✓	+	✱	+	+
39	✱ L12J39R	6800	✱ L12J6K8							60,000	— 60K	✓	✓	✱	✱	✓	✓
47	✓ L12J47R	8200	✱ L12J8K2							70,000	— 70K	✱	✓	✓	✓	✓	✓
56	✱ L12J56R	10000	✓ L12J10K							75,000	— 75K	✓	✓	✱	✓	✓	✓
68	✓ L12J68R	12000	✱ L12J12K							80,000	— 80K	✱	✓	✓	✓	✓	✓
82	✓ L12J82R	15000	✓ L12J15K							100,000	— 100K	✓	+	+	✓	+	+
100	✓ L12J100	18000	✓ L12J18K							125,000	— 125K	✱	✓	✓	✓	✓	✓
120	✱ L12J120	22000	✓ L12J22K							150,000	— 150K	✓	✓	✓	✓	✓	✓
150	✓ L12J150	27000	✱ L12J27K							175,000	— 175K	✓	✓	✓	✓	✓	✓
180	✓ L12J180	33000	✱ L12J33K							200,000	— 200K	✓	✓	✓	✓	✓	✓
220	✱ L12J220	39000	✱ L12J39K							250,000	— 250K	✓	✓	✓	✓	✓	✓
270	✓ L12J270	47000	✱ L12J47K														
330	✓ L12J330	51000	✓ L12J51K														
390	✓ L12J390																

- ✱ = Most popular stock values
- ✓ = Stock values
- ✱ = Non-stock 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.