

Type R Series

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The resistive element comprises a thin film of nickel-chrome alloy evaporated onto a high thermal conductivity ceramic element. Metal end caps are force fitted to the element prior to spiralling to value. Tinned copper lead wires are welded to the end caps and the components are then coated. One coat of phenolic resin is followed by three coats of epoxy resin. All resistors are tested for value and tolerance.

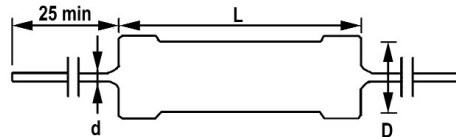
Key Features

- Precision metal film resistors with tolerance to 0.1% and temperature coefficients to 15ppm.
- Metal film resistors have excellent stability under load and severe environmental conditions. They exhibit very low noise current and voltage coefficients. Precision metal film resistors are particularly suitable in all applications where long-term stability is important.

Characteristics - Electrical

	YR8	ER8	CR8	YR1	ER1	CR1	YR2	ER2	CR2
Rated Power @ 70 °C (W)		0.125			0.25			0.5	
Resistance Range (ohms) Min		51R1			10R			10R	
Max		511K			1M0			1M0	
Tolerance (%)				0.1	0.25	0.5			
Code Letter				B	C	D			
Temperature Coefficient (ppm/°C)	± 15	± 25	± 50	± 15	± 25	± 50	± 15	± 25	± 50
Selection Series					E96				
Limiting Element Voltage - Nominal (V)		200			250			350	
Maximum Overload Voltage (V)		400			500			700	
Operating Temperature Range (°C)					-65 to +155				
Dielectric Strength (V)					500				
Insulation Resistance Min Dry (Mohms)					10,000				
Voltage Coefficient Max (ppm/V)					5				

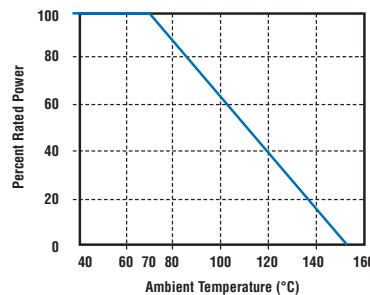
Dimensions



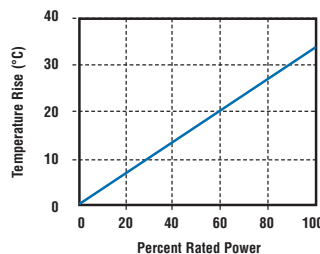
Style	L*	D	d nom
R8	3.3 ± 0.1	1.7 ± 0.2	0.45
R1	6.3 ± 0.3	2.3 ± 0.2	0.6
R2	9.5 ± 0.5	3.5 ± 0.5	0.6

\* Length is measured in accordance with IEC 294

Derating Curve



Surface Temperature Vs Load



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**Mounting**

The resistors are suitable for processing on automatic insertion equipment and cutting and bending machines.

**Marking**

The resistors are marked with a five-band colour code in accordance with IEC 62.

**Packaging**

R series colour coded resistors are normally supplied taped in 'ammo' boxes of 1000 pieces. All tape specifications are in accordance with IEC286-1.

**Performance Characteristics**

Evaluation of the performance characteristics is carried out with reference to IEC specifications QC 400 000 and QC 400 100.

TEST REF	Long Term Tests $\pm(1\% + 0.05 \text{ ohm})$
4.23	Climatic sequence
4.24	Damp heat, steady state
4.25.1	Endurance at 70 °C
4.25.3	Endurance at 125 °C
TEST REF	Short Term Tests $\pm(0.25\% + 0.05 \text{ ohm})$
4.13	Overload
4.16	Robustness of terminations
4.18	Resistance to soldering heat
4.19	Rapid change of temperature
4.22	Vibration

**How to Order**

Orders for these components should include the following information:-  
Type, tolerance code letter and value e.g. **YR1 B 24K3**