

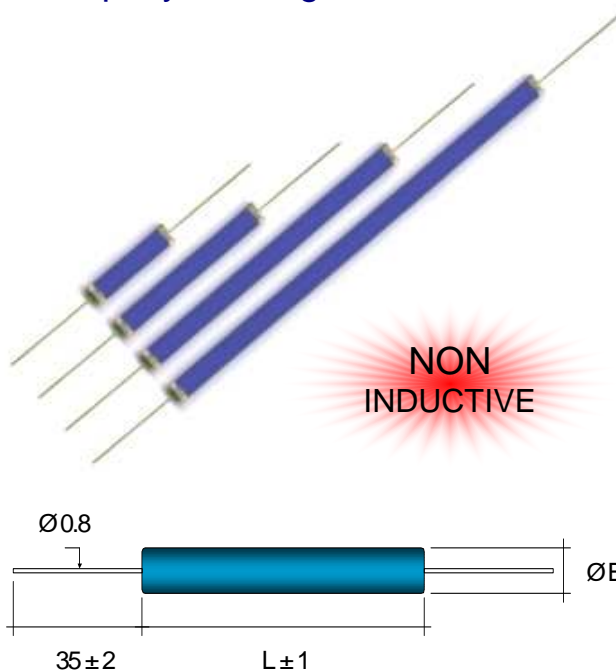
High Voltage Resistors Series 400E

Precision, Non-Inductive, Low TC, Epoxy Coating

High Voltage Resistors Series 400E have been specifically developed for use in high performance industrial high voltage systems. These precision high voltage resistors combine proprietary non-inductive resistance system and design to achieve low temperature coefficient, low voltage coefficients, high stability and increased high operating voltages.

Low TC Precision High Voltage Resistors Series 400E with high-temperature, solvent-resistant epoxy coating are intended for use in almost any environment, including oil and SF6. Typical applications are medical systems like X-ray as well as power supplies or instruments.

Model	Wattage	Max. Oper. Voltage	Dimensions in millimeters ± 0.50 [Dimensions in inches ± 0.02]	
			L	B
400.2E	3.80	15'000	27.00 [1.07]	8.00 [0.32]
400.3E	5.00	21'000	37.00 [1.46]	8.00 [0.32]
400.5E	7.50	30'000	52.00 [2.05]	8.00 [0.32]
400.7E	10.00	45'000	77.00 [3.03]	8.00 [0.32]
400.10E	13.50	60'000	102.00 [4.02]	8.00 [0.32]
400.12E	16.00	72'000	122.00 [4.80]	8.00 [0.32]
400.15E	20.00	90'000	152.00 [5.98]	8.00 [0.32]



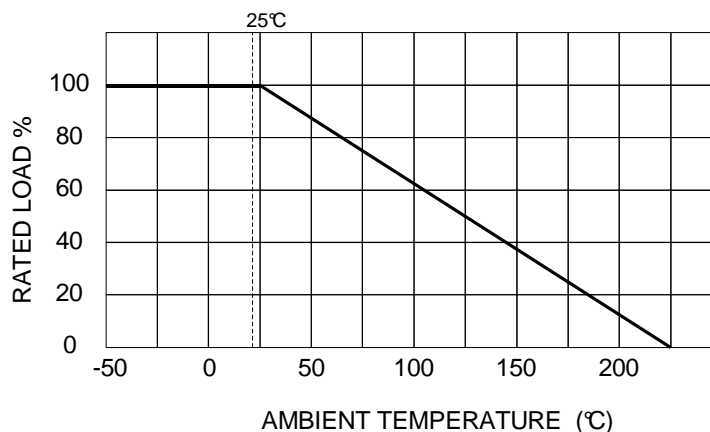
Characteristics

Resistance Values	from 1K Ω to as high as 100G Ω on all models (to 1T Ω on request)		
Tolerances	0.05%, 0.1%, 0.25%, 0.5%, 1%, 2%, 5%, 10% (0.05% avail. to 10G, 0.25% to 100G, other on request)		
Temperature Coefficients	5, 10, 15, 25, 50 and 100 ppm/ $^{\circ}$ C (10 ppm/ $^{\circ}$ C available to 10G, 25 ppm/ $^{\circ}$ C to 100G, other on request)		
Operating Temperature	-55 .. +225 $^{\circ}$ C (extended temperature range to 350 $^{\circ}$ C available)		
Insulation Resistance	> 10'000 M Ω	500 Volt 25 $^{\circ}$ C 75% relative humidity	
Dielectric Strength	> 1'000 Volt	25 $^{\circ}$ C 75% relative humidity	
Thermal Shock	Δ R/R < 0.1% typ., 0.20% max.	MIL Std. 202, method 107 Cond. C	IEC 68 - 2 - 14
Overload	Δ R/R < 0.1% typ., 0.25% max.	1,5 x P _{nom} , 5 sec (do not exceed max. voltage)	
Moisture Resistance	Δ R/R < 0.1% typ., 0.25% max.	MIL Std. 202, method 106	IEC 68 - 2 - 3
Load Life	Δ R/R < 0.1% typ., 0.25% max.	1000 hours at rated power	IEC 115 - 1
Encapsulation	Epoxy Conformal Coating	Core Material	Al ₂ O ₃ (96%)
Lead Material	Gold Plated	Resistor Material	Ruthenium Oxide

Voltage Coefficients of Resistance

Derating Curve

Model	Resistance Range	VCR (-ppm/V)*
400.2E	1K .. 500M	< 0.40
	500M .. 5G	< 0.75
400.3E	1K .. 1G	< 0.20
	1G .. 10G	< 0.40
400.5E	1K .. 1G5	< 0.15
	1G5 .. 15G	< 0.30
400.7E	1K .. 2G5	< 0.10
	2G5 .. 25G	< 0.15
400.10E	1K .. 3G	< 0.08
	3G .. 30G	< 0.12
400.12E	1K .. 4G	< 0.06
	4G .. 40G	< 0.10
400.15E	1K .. 5G	< 0.04
	5G .. 50G	< 0.08



* typical values, contact factory for details