

# Type SR & SXR Smoothwound Resistors-75 to 1050 Watts

## APPLICATION

Powerohm's Type SR & SXR Smoothwound Resistors can be used in any AC or DC power circuit. Units are most commonly used for light-duty braking of variable frequency drives, small horsepower motor control, space heaters and any low wattage, high resistance load application.

The Type SR & SXR resistors are suitable for continuous duty applications where high resistance and low current are required. These units are designed to withstand considerable shock, making them suitable for high vibration applications.

## BASIC CONSTRUCTION

High-quality components are used to manufacture Powerohm's Type SR and SXR resistors assuring long life and reliability. Our smoothwound resistors are durable units consisting of a low temperature coefficient resistance wire wound on a high-quality steatite tube. After fixed terminations are installed, the units are coated with a ceramic cement. The SR resistor has a special coating which contains a coarse sand. This special granular coating increases the surface area of the unit, yielding a much higher watt density per size than can be obtained using vitreous enamel or ordinary resistor cement.

Our ceramic insulating cores are manufactured in-house to maintain total control over production and quality standards. Powerohm is the only domestic resistor manufacturer with this added advantage.

## OPTIONS

**COIL SIZES:** Type SR & SXR resistors are available in (13) standard sizes. Wattage values vary from 75 to 1050 watts per coil. These units are custom wound to any resistance value required within the limits of the resistance range listed in the table on the following page.

**TERMINALS:** Multiple fixed, or adjustable terminals which slide along the element to any position on the coil, are available for all units.

**ENCLOSURES:** Powerohm Type SR & SXR Smoothwound Resistors can be mounted on brackets or in our standard selection of enclosures. See the enclosure section of our catalog for details, or contact the factory for assistance.



## ELECTRICAL CHARACTERISTICS

**VOLTAGE INSULATION:** A standard Type SR and SXR resistor is insulated for up to 600 volts maximum. End insulation can be added to increase this to 1000 volts. Standard enclosures can be insulated for voltages exceeding 1000 volts.

**RESISTANCE TOLERANCE:** + 10% for all units; + 3% if required.

**COEFFICIENT OF RESISTIVITY:** Resistance values will increase as the element temperature rises. Expect an approximate increase of 5% in resistance after the unit reaches an operating temperature of 375°C above ambient. Contact the factory for more specific information if needed.

**AMBIENT TEMPERATURE:** Standard ratings are based on maximum ambient temperatures of 40°C. Derate wattage rating 90% for 50°C ambient, 80% for 80°C ambient and 70% for 100°C ambient.

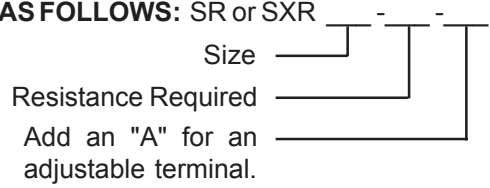
**EFFECTS OF ALTITUDE:** The published electrical ratings are applicable for altitudes of 6000 feet or less. Contact the factory for deration factors above 6000 feet.

## CUSTOM DESIGNS

Powerohm offers a complete selection of standard size coils. Each size coil has the same wattage rating and can be furnished with almost any desired resistance value. Numerous variations are available for almost any application. Please contact the factory if there are special service requirements, such as overloads, high peak currents, high ambient temperatures, etc.

# Type SR & SXR Electrical Ratings & Coil Dimensions

**SPECIFY PART NUMBERS AS FOLLOWS:** SR or SXR



For example, the part number for a 200 watt, 100 ohm coil is SR5-100. The catalog number for the same coil with an adjustable terminal is SR5-100-A.

**RATINGS:** The continuous current ratings are based on a 375°C temperature rise. The resistance values are measured at 25°C and have a + 10% tolerance.

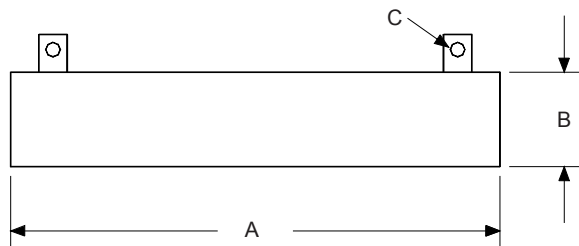
## TYPE SR ELECTRICAL RATINGS & DIMENSIONS OF STANDARD SIZE COILS

SIZE	WATTAGE	RESISTANCE RANGE (OHMS)	DIMENSIONS IN INCHES				
			A	B	C	D	E
3	75	2 - 1500	3	1-1/4	13/64	3/4	1/2
4	125	2 - 2500	4	1-1/4	13/64	3/4	1/2
5	200	3 - 5000	5-1/2	1-1/4	13/64	3/4	1/2
6	250	3 - 5000	6-1/2	1-1/4	13/64	3/4	1/2
7	300	3 - 5000	7-1/2	1-1/4	13/64	3/4	1/2
8	350	3 - 5000	8-1/2	1-1/4	13/64	3/4	1/2
10	450	4 - 7500	10-1/2	1-1/4	13/64	3/4	1/2

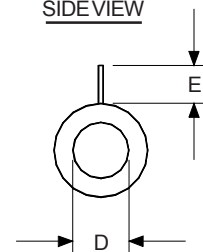
## TYPE SXR ELECTRICAL RATINGS & DIMENSIONS OF STANDARD SIZE COILS

SIZE	WATTAGE	RESISTANCE RANGE (OHMS)	DIMENSIONS IN INCHES				
			A	B	C	D	E
2	300	2 - 1500	6	2	7/32	1-1/8	3/4
3	450	2 - 2000	9	2	7/32	1-1/8	3/4
4	600	3 - 2500	12	2	7/32	1-1/8	3/4
5	750	4 - 3000	15	2	7/32	1-1/8	3/4
6	900	4 - 3500	18	2	7/32	1-1/8	3/4
7	1050	5 - 4000	21	2	7/32	1-1/8	3/4

FRONT VIEW



SIDE VIEW



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