



SURE RESISTORS

SURE ALUMINUM HOUSED DYNAMIC BRAKING RESISTORS - SBH

FEATURES



- Custom built resistors to meet your requirements.
- High Power and Excellent load life stability.
- Excellent short time over load.
- Strongly resistant to moisture & solvent.
- Self-extinguish material is used in moldings.
- Non-inductive type also available.
- High-surge- resistant items are also available.

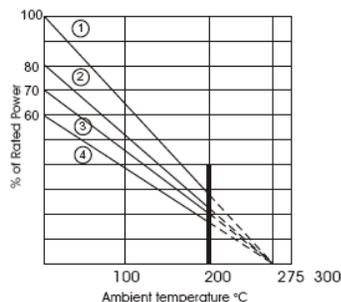
QUICK REFERENCE DATA

Operating Temp.	-55 °C - +275 °C
Insulation Resistance	20MW MIN
Dielectric Strength	AC 1000V, 2000V for 1 min
Temp. Coefficient	50 ppm/°C, 100 ppm/°C, 260 ppm/°C
Short Time Over Load	10 X Wattage Rating, 5 sec
Moisture resistance	temp 40°C moisture 95% DC100v500h
Thermal Shock	Wattage Rating 30min. -25°C, 15min
Vibration	10c/c ~ 50 c/s ~ 10 c/s (1min) -2h each of paralleled and right angle.
Load Life	Wattage Rating 1.5 h On, 30min off, 1000h
De-rate to zero	at 275°C

TECHNOLOGY

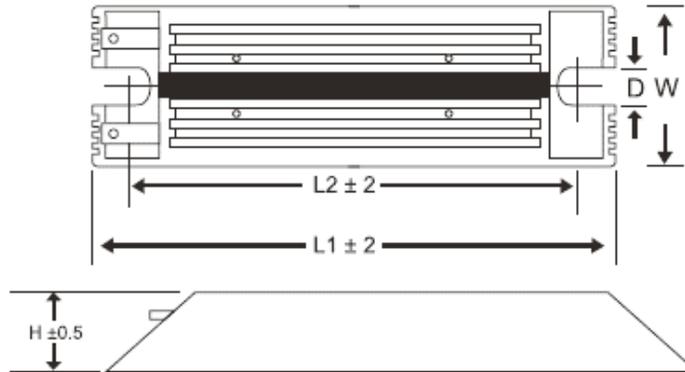
SBH: The resistive element is a low ppm resistance wire that is wound on a special grade porcelain tube. The terminals have fully welded construction to provide a good mechanical and electrical contact. The assembly is embedded in the aluminum casing. The aluminum casing is made from high quality heat sink grade material, which helps to dissipate the heat from the resistor at the faster rate resulting low change of resistance with respect to temperature, as resistance varies in direct proportion to temperature. The casing is filled with high purity and special silica sand to extract the heat from the resistor body at the slower rate. The conduction of heat thorough the sand brings uniform heat to the aluminum casing for further dissipation. This protects the panels from being heated internally. Terminal contacts are provided with the screw arrangement for easy wiring.

ELECTRICAL CHARACTERISTICS



- On Heat Sink 60W~500W
- Free Air 60W~150W
- Free Air 200W~300W
- Free Air 400W~500W

Fig - Maximum dissipation (Pmax) in percentage of rated power as a function of the ambient temperature (Tamb)

MECHANICAL DATA

Type	Watts@ 20°C with heat sink	Watts@ 20°C without heat sink	DIMENSIONS (MM)					Approx. Weight (g)
			L1	L2	W	H	D	
SBH - 60	60	48	115	100	40	20	4	110
SBH - 80	80	64	140	125	40	20	4	150
SBH - 100	100	80	165	150	40	20	4	180
SBH - 120	120	96	190	175	40	20	4	240
SBH - 150	150	120	215	200	40	20	4	300
SBH - 200	200	140	165	150	60	30	5.3	500
SBH - 300	300	210	215	200	60	30	5.3	700
SBH - 400	400	240	265	250	60	30	5.3	850
SBH - 500	500	300	330	315	60	30	5.3	1000
SBH - 750	750	450	330	315	80	40	6.3	1900
SBH - 1000	1000	600	400	385	80	40	6.3	2300
SBH - 1250	1250	720	495	480	80	40	6.3	2900
SBH - 1500	1500	900	550	535	80	40	6.3	3200

Recommended Heat Sink Size for additional optimum performance:

60W-120W: 200 x 200 x 3 mm

150W-300W: 300 x 300 x 3 mm

400W-500W: 450 x 450 x 3 mm

If finned heat-sink is used, surface area should be equal to the above heat sink area.

APPLICATION INFORMATION

Braking resistors are used with inverters, driving motors with a dynamic load that requires to be stopped quickly, such as lifts, cranes, or high-speed mechanisms. The braking resistor is connected in the DC link, between the rectifiers and the switching semi-conductors. When the DC voltage rises, to a pre selected limit, a chopper circuit switches in the braking resistor thereby allowing excess energy to be "dumped" in the form of heat, instead of causing damage to the inverter. When the DC level drops to a lower preset minimum limit the braking resistor is switched out of circuit until it is required again.

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116-117, Manish Industrial Estate No 2, Navghar Road, Vasai (East), Thane: 401210

Telefax: (0250) 2391542 / 2391161, Resi: (022) 28926425, Mob: 09987062657

Email: marketing@sureresistors.com, URL: www.sureresistors.com