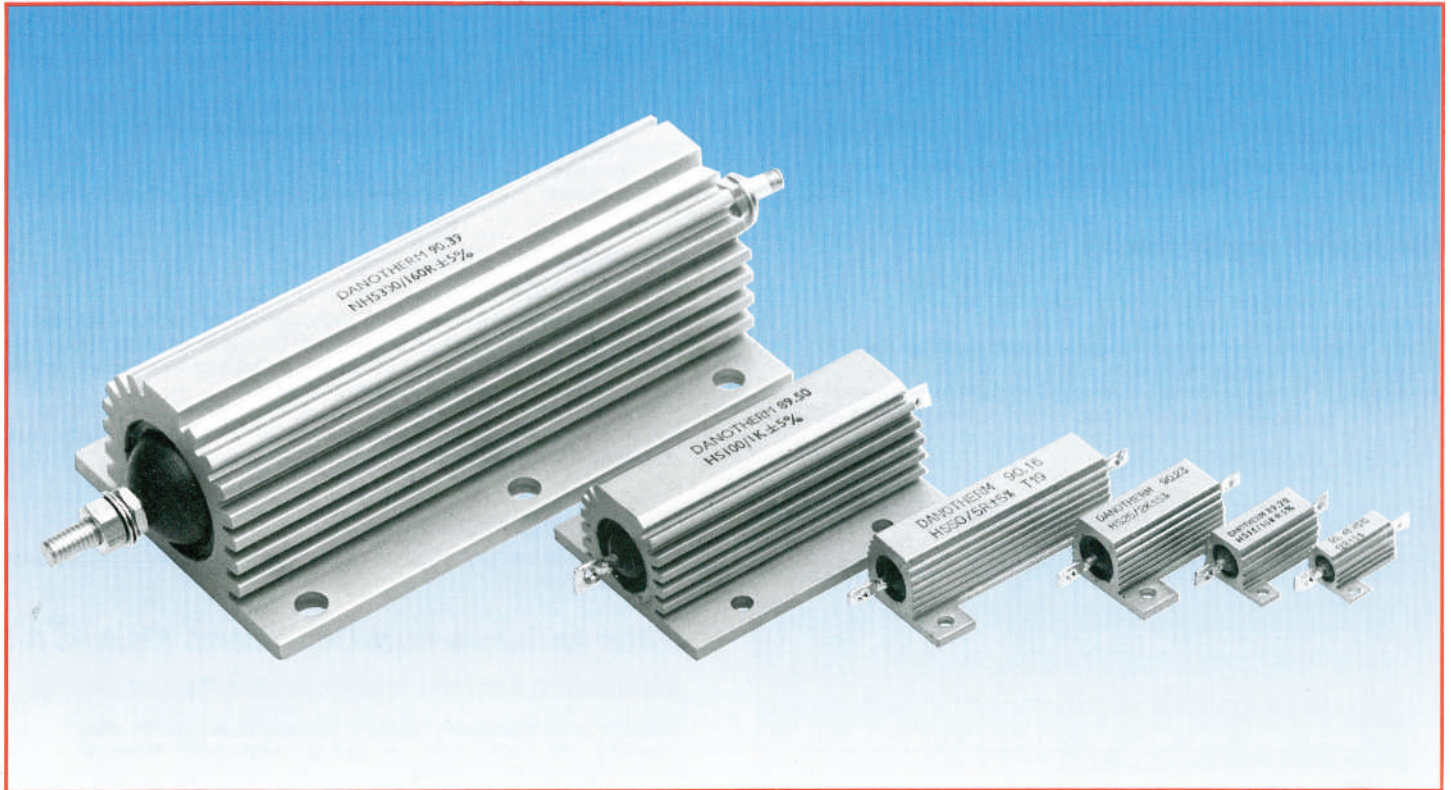




DANOTHERM

Aluminium housed power wirewound resistors series HS



The HS style is a range of high quality, high stability aluminium housed power wirewound resistors designed for direct heat sink attachment. The resistive element is wound onto high thermal conductivity ceramic formers ground to a close toleranced finish ensuring maximum contact for rapid heat transfer. This element is encapsulated in the aluminium housing by a transfer moulding process which ensures a good humidity seal and a permanent compression fit.

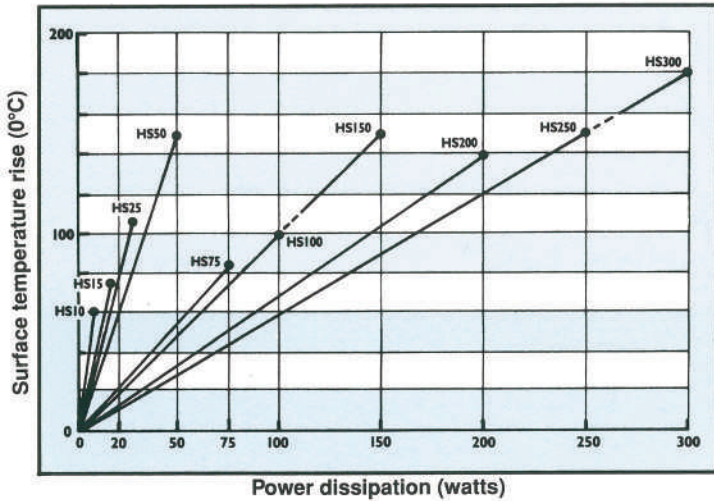
The encapsulant is a high temperature silicone moulding compound and the special mould tool design ensures accurate concentricity of the resistive element inside the housing giving a high level of voltage protection.

Features: ● Designed for heat sink mounting ● Low ohmic values down to R005 ● Solder, cable, threaded or fast-on terminations ● Inductive or non inductive windings ● Manufacturing approved to CECC 40,000. Part of range approved to CECC 40203.001.

Electrical specifications

	style mil-R 18546	style CECC 40203001	power rating heat sink mounted	(watts) @ 25° without heat sink	resistance range ohms	max working voltage DC/AC rms	dielectric strength a.c. peak	stability ▲ R% per 1000 hrs	max weight gms	surface temp rise °C/watt std. heat sink mounted	standard het sink (aluminium) thickness (mm)	
											area cm ²	
HS10	RE60	AA	10	5.5	R005-5K	160	1000	1	4	5.8	415	1
HS15	RE65	BA	15	8	R005-10K	265	1000	1	7	5.1	415	1
HS25	RE70	CA	25	12.5	R01-25K	550	2500	1	14	4.2	535	1
HS50	RE75	DA	50	20	R01-50K	1250	2500	1	32	3.0	535	1
HS75			75	45	R1-50K	1400	5000	2	85	1.1	995	3
HS100			100	50	R1-70K	1900	5000	2	115	1.0	995	3
HS150			150	55	R1-100K	2500	5000	2	175	1.0	995	3
HS200			200	50	R1-39K	1900	5000	3	475	0.7	3750	3
HS250			250	60	R1-51K	2200	5000	3	600	0.6	4765	3
HS300			300	75	R1-62K	2500	5000	3	700	0.6	5780	3

Graph showing surface temperature rise/ Power dissipation



Mechanical specifications

Core: Ceramic, steatite or alumina depending on size
Element: Copper nickel alloy or nickel chrome alloy
End caps: Nickel iron or stainless steel
Encapsulant: High temperature silicone moulding compound
Housing: Anodised aluminium
Terminals: HS10 to HS150: solder coated steel cored copper.
 HS200 to HS300: Brass, stainless steel or copper clad steel

	ToI.	HS10	HS15	HS25	HS50	HS75	HS100	HS150	HS200	HS250	HS300	
A	Max.	17.0	21.0	28.0	30.0	48.0	48.0	48.0	73.0	73.0	73.0	
B	Max.	30.0	36.5	51.0	72.5	71.0	88.0	122.0	145.0	165.0	185.0	
C	Max.	9.0	11.0	15.0	17.0	26.0	26.0	26.0	45.0	45.0	45.0	
D	mm±1.6	8.5	11.2	13.5	15.1	27.0	27.0	27.0	46.0	46.0	46.0	
E	Max.	17.0	21.0	29.0	51.0	49.0	65.5	98.0	90.0	109.0	128.0	
F	mm±0.3	11.3	14.3	18.3	39.7	29.0	35.0	58.0	70.0	89.0	104.0	
G	±0.3	12.4	15.9	19.8	21.4	37.0	37.0	37.0	57.2	57.2	59.0	
H	±0.5	4.0	5.2	7.2	7.9	11.5	11.5	11.5	20.0	20.0	20.0	
J	±0.4	2.0	2.4	4.3	4.8	10.0	15.0	20.0	10.0	10.0	12.0	
K	±0.8	1.7	2.4	2.4	2.4	3.5	3.5	3.5	5.0	5.0	5.0	
L	±0.25* mm dia.	2.4	2.4	3.2	3.2	4.4	4.4	4.4	5.1	5.1	6.6	
M	Max.	Not applicable						106.0	125.0	144.0		

* HS200-HS300 ±0.2 mm

Surface Temperature – Surface temperature of resistor related to power dissipation. The resistor is standard heat sink mounted using a proprietary heatsink compound.

Tolerance: Standard 5% and 10%
 Also available 1%, 2% and 3%

Tolerances for low Ohmic Values: $\geq RO5 \pm 5\% \leq RO47 \pm 10\%$

Temperature Coefficients: Above 50R 25ppm/°C is standard
 IR-50R 50ppm/°C is standard
 Below IR 100ppm/°C is standard
 For lower TC's please consult the factory

Insulation Resistance (Dry): 10,000M R minimum

Non Inductive Styles 'NHS': HS resistors are available with non-inductive windings and are identified by adding the letter N before the HS identification, e.g. NHS10, NHS15, NHS25, NHS50
 Divide maximum value by 4
 Divide maximum working volts by 1.414

Power dissipation at high ambient temperatures: Dissipation derates linearly to zero at 275°C

Application Notes Heat Dissipation:

Whilst the use of proprietary heat sinks with lower thermal resistance is acceptable uprating is not recommended. For maximum heat transfer it is recommended that a heat sink compound be applied between the resistor base and heat sink/chassis mounting surface.
 It is essential that the maximum hot spot temperature of 275° is not exceeded and therefore the resistor must be mounted on a heat sink of correct thermal resistance for the power being dissipated.

Maximum Overload:

Please consult the factory for assistance concerning your particular overload application.

Other resistors from Danotherm Electric A/S Aluminium housed resistors in different profile

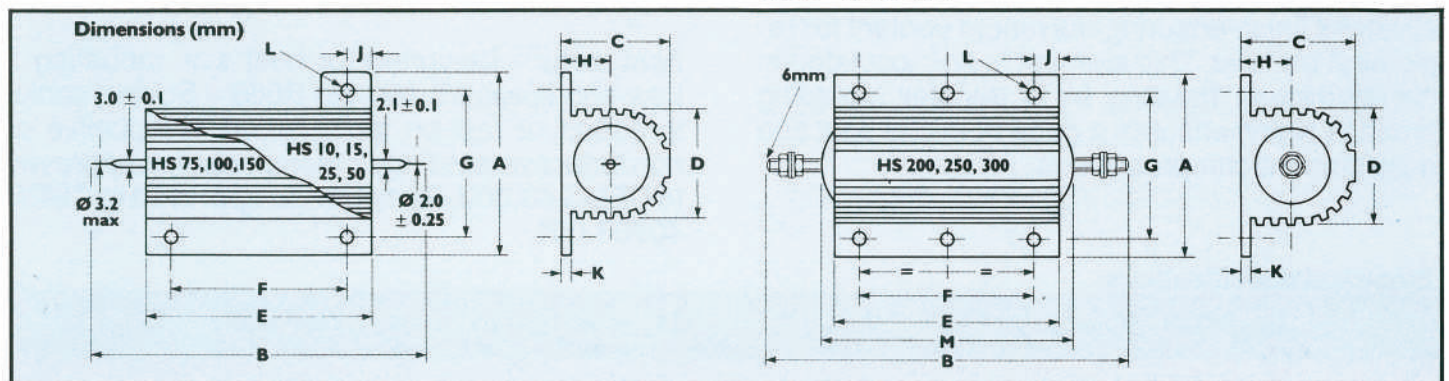
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Wirewound, vitreous enamelled resistors

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500 W - 10 M WATT



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