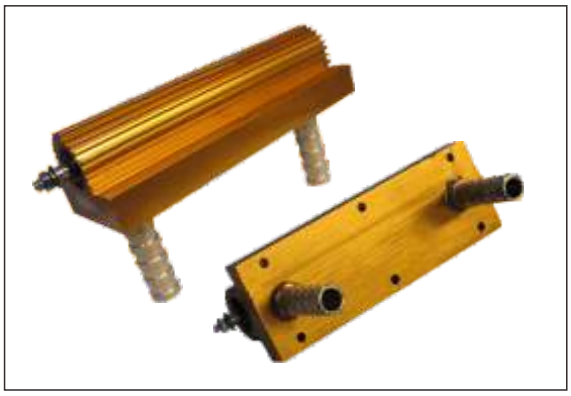
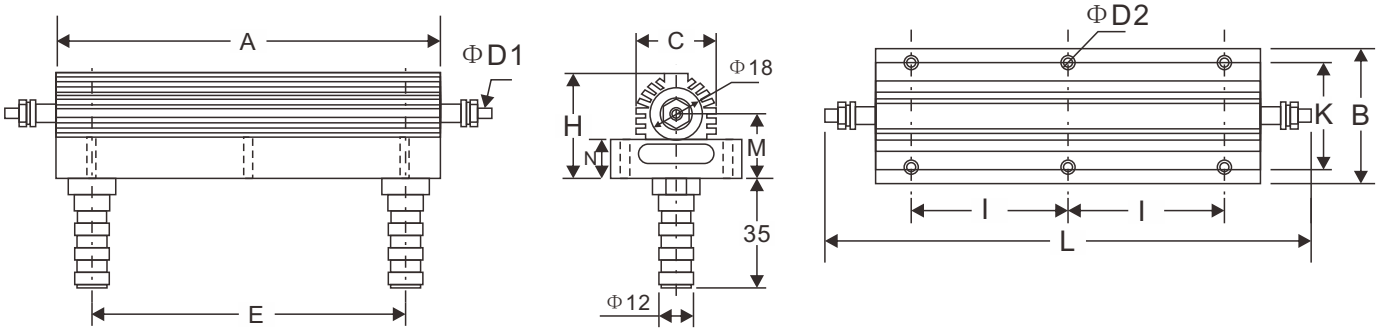
HWC Water-cooling High Power Resistors



Feature

Ⅰ Use water to cool off the heat, do not need to assemble large area of cooling pin, assembly and usage is very convenient.
Ⅱ Small Volume, large load power(is 4-8times to the product of no water cooling)
Ⅲ We can do the type of no inductance of this kind. Use the code "N"

Dimension



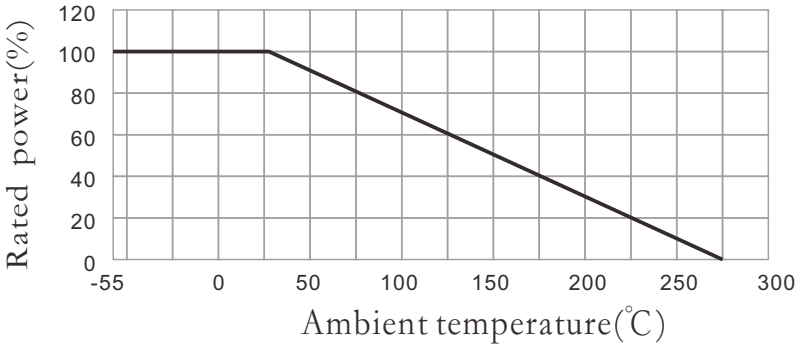
Type	Power (W)	Dimension(mm)											
		A	B	L	H	C	I	K	M	N	D1	D2	E
HWC	150	66.5	48	100	37	37	23	37	22	14	M4	Φ4.5	42.5
	200	98	48	131	37	37	35	37	22	14	M4	Φ4.5	74
	300	135	48	167	37	37	55	37	22	14	M4	Φ4.5	111
	400	92	73	139	60	46	35	58	36	20	M6	Φ5.5	68
	500	112	73	159	60	46	45	58	36	20	M6	Φ5.5	88
	600	130	73	177	60	46	51	58	36	20	M6	Φ5.5	106
	1000	204	73	251	60	46	87	58	36	20	M6	Φ5.5	180

Notes:
1.There is no special attention to the assembly of the resistor, and should be convenient to the connection with the water tap.
2.The outer diameter of the water nozzle of the resistor is Φ12mm, the size of the water hose should be well matched with the water nozzle.
3.The water flow used for the heat dissipation of the resistor should be more than 2L/min,hydraulic pressure should be in the range of 0.14Mpa—0.3Mpa, and had better assemble a water pressure gauge to control.
4.Water for the heat dissipation should be city tap water, if underground water, water should be softening treatment.
5.Before using the resistor, you should connect with water first.

Reference Standards

JIS C 5201-1

Derating Curve



Applications And Ratings

Type	Power (W)		Reisitours(Ω)	Dielectric Voltage withstan(V)	Tolerance	TCR
	water cooling	No water cooling				
HWC	150	45	0.01Ω～39K	2000	±1%	±50ppm/℃
	200	50	0.01Ω～51K			
	300	55	0.01Ω～56K			
	400	50	0.01Ω～62K	3000	±5%	±100ppm/℃
	500	60	0.01Ω～68K			
	600	75	0.01Ω～75K	4000		
	1000	200	0.01Ω～82K			

Performance

Test Items	Performance	Test Methods(JIS C 5201-1)
Terminal tensile strength	No mcchanical damage	40n,30s
Fast temperature change	≤ ±(1%r0±0.05Ω)	-55℃， 30min/125℃， 30min;5cycles
Short time overload	≤ ±(1%r0±0.05Ω)	10pr,5s
Constant damp-heat	≤ ±(1%r0±0.05Ω)	40±2℃， rh93±3%
Shock	≤ ±(1%r0±0.05Ω)	50g,11ms ,18cycles
Vibration	≤ ±(1%r0±0.05Ω)	10—1000hz,0.75mm,200m/s²
Insulation withstand voltage	No breakdown or flashover	Vac,1min
Endurance	≤ ±(5%r0±0.05Ω)	40℃， pr,1000h

Ordering Information

Example

HWC	300	100R0	J	N
(1)	(2)	(3)	(4)	(5)
Product Name	Power Rating	Resistance Value	Resistance Tolerance	Special code

(1)Type:HWC

(2)Power Rating:50=50W,100=100W,300=300W,400=400W…

(3)Resistance Value: 0R100=0.1Ω,0R220=0.22Ω,100R0=100Ω,10K00=10KΩ

(4)Resistance Tolerance :F=±1%,J=±5%

(5)Special code: N=Non-Inductive