NHSW Series

Water-Cooled Aluminium-Housed Wirewound Power Resistors

The NHSW series uses a water-cooled, aluminium-housed wirewound construction. Dimensions are provided for 150W, 200W, 300W, 400W and 500W. The ratings, derating curve and performance tests below apply to NHSW500 6R2JN.

NHSW500 Ratings

Item	Specification
Model	NHSW500 6R2JN
Rated power	500W
Nominal resistance	6.2Ω
Tolerance (accuracy)	±5%
Rated voltage (V)	√[Rated power (W) × Nominal resistance (R)]
Operating temperature	-55°C to 155°C
Temperature coefficient	250×10^{-6}/°C

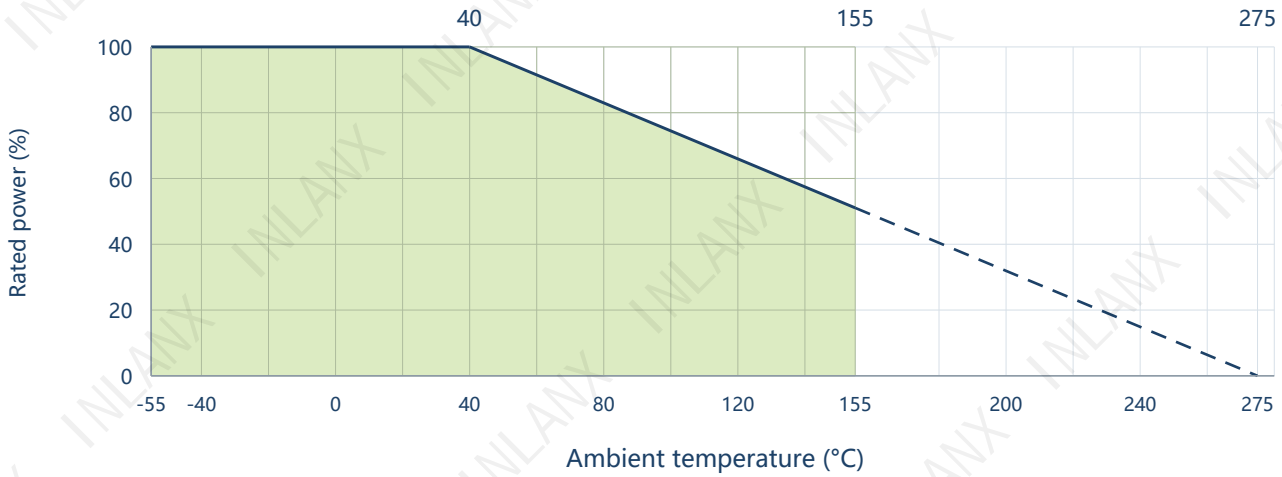


NHSW series product appearance

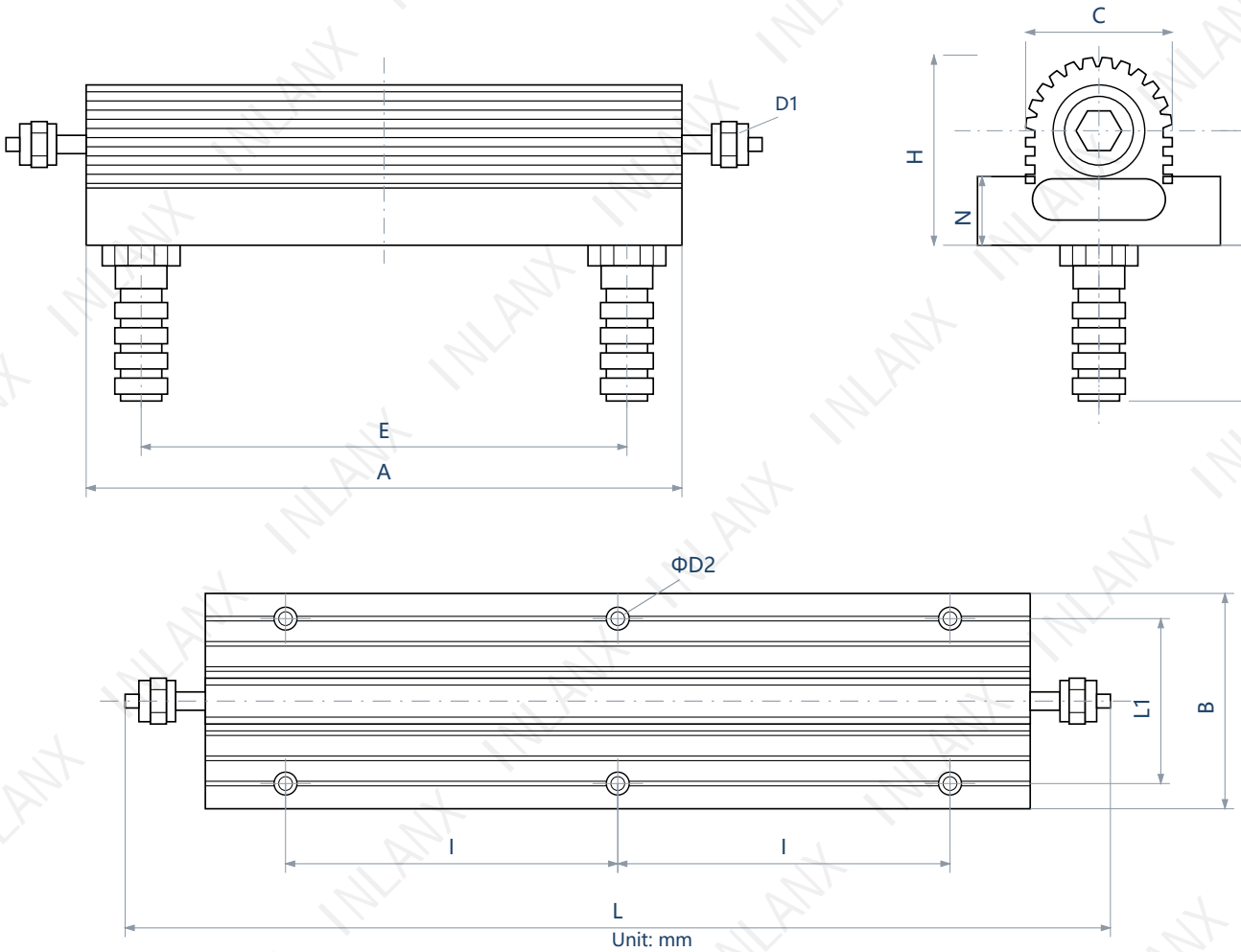
Applicable Standard

GB/T5729-2003/IEC60115-1:2001 IDT

NHSW500 Derating Curve



Series Dimensions



Dimensions Table (mm)

Power (W)	A	B	L	H	C	I	L1	M	N	D1	D2	E
150	66.5	48	100	37	27	23	37	22	14	M4	Φ4.5	42.5
200	98	48	131	37	27	35	37	22	14	M4	Φ4.5	74
300	135	48	167	37	27	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

NHSW500 Performance Tests

No.	Test	Test method	Performance requirement
1	Dimensions	GB/T5729-2003, Clause 4.4	All dimensions shall comply with specified values.
2	Voltage proof (dielectric withstand)	GB/T5729-2003, Clause 4.7 2000Vac, 60S	No breakdown or flashover.
3	Terminal strength	GB/T5729-2003, Clause 4.16 Tensile test: 40N	No visible damage; markings clear. $\Delta R \leq \pm(1\%+0.05\Omega)$
4	Overload	GB/T5729-2003, Clause 4.13 5 times rated power; 5S	No visible damage; markings clear. $\Delta R \leq \pm(1\%R+0.05\Omega)$
5	Resistance variation with temperature (TCR)	GB/T5729-2003, Clause 4.8 -55°C/+20°C +20°C/155°C	250×10^{-6}/°C
6	Shock	GB/T5729-2003, Clause 4.21 Acceleration: 490m/s²; pulse duration: 11mS; half-sine wave	No visible damage. $\Delta R \leq \pm(1\%R+0.05\Omega)$
7	Vibration	GB/T5729-2003, Clause 4.22 Frequency: 10-500HZ Amplitude: 0.75mm or acceleration 98m/s² (whichever is smaller) Total duration: 6h	No visible damage. $\Delta R \leq \pm(1\%R+0.05\Omega)$
8	Rapid temperature change	GB/T5729-2003, Clause 4.19 QA: -55°C QB: +155°C; 5 cycles in total	No visible damage. $\Delta R \leq \pm(1\%R+0.05\Omega)$
9	Endurance at 40°C	GB/T5729-2003, Clause 4.25 40°C, PR, 1000h	$\Delta R \leq \pm(5\%R+0.05\Omega)$

Ordering Example

Model	Rated power	Nominal resistance	Tolerance
NHSW500	500W	6R2	J