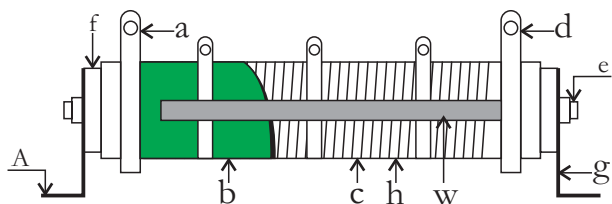


● Features

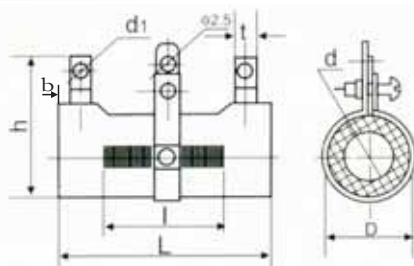
- I Surface painted, wide power range
- II Excellent high temperature load performance
- III Full-welded structure
- IV High reliability
- V Imported grey and green coating, character marking assembly and fittings (available)
- VI Resistance tolerance: $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$

● Construction



ad	Terminal block
b	High voltage insulation ceramic glaze covering
c	Alloy wire
e	Metal screw
f	Ceramic facing
h	Alumina porcelain
g	Zinc plating support
w	Variable resistance area

● Dimensions



Type	Power	Dimensions (mm)							
		$L \pm 2$	$D \pm 2$	$d \pm 0.5$	$h \pm 3$	$b \pm 1$	$t \pm 2$	$I \pm 2$	$d1 \pm 1$
KNW	10	26	13	4	27	3.5	4.5	10	2
KNW	15	35	14	5.5	28.5	3.5	4.5	20	2
KNW	20	41	14	5.5	28.5	3.5	4.5	20	2
KNW	25	45	17	8	31	3.5	4.5	25	2
KNW	30	51	17	8	31	3.5	4.5	35	2
KNW	35	51	21	12	35	3.5	4.5	35	2
KNW	40	71	21	12	35	3.5	4.5	55	2
KNW	45	87	21	12	35	3.5	4.5	60	2
KNW	50	91	29	20	43	4.5	6	75	3
KNW	60	91	29	20	43	4.5	6	75	3
KNW	75	140	29	20	43	4.5	6	120	3
KNW	80	140	29	20	43	4.5	6	120	3
KNW	100	170	29	20	43	4.5	6	150	3
KNW	120	170	29	20	43	4.5	6	150	3
KNW	150	215	29	20	43	4.5	6	200	3
KNW	180	215	29	20	43	4.5	6	200	3
KNW	200	265	29	20	43	4.5	6	240	3
KNW	250	265	29	20	43	4.5	6	240	3
KNW	300	268	42	20	46	4.5	8	250	4
KNW	350	250	42	30	55	4.5	8	230	4
KNW	400	300	42	30	55	4.5	8	280	4
KNW	500	330	52	25	65	4.5	8	310	4

Note: Customized products are available.

Our factory can also produce 600W~8000W non-standard resistors according to the requirement

Ordering Information

Example:

KNW	300	J	10R00	A
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	Resistance	Special code

(1)Type: KNW SERIES

(2)Power Rating: 10B=10W,50B=50W,100=100W,300=300W

(3)Tolerance: F=±1%,G=±2%,J=±5%,K=±10%

(4)Resistance Value:0R100=0.1Ω,0R200=0.20Ω,10R00=10Ω,10K00=10KΩ

(5)Special code: A1=Without brackets,A2=With brackets

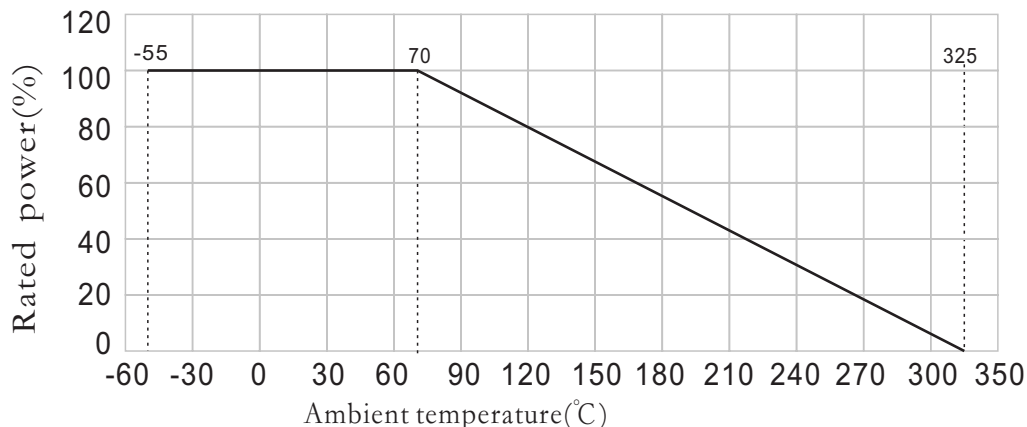
Reference Standards

JISC 5201-1

Applications And Ratings

Type	Power(W)	Resistance Range(Ω)	Tolerance	T.C.R PPM/°C	Max Working Voltage (V)	Max Overload Voltage (V)	Operating Temp.Range
KNW	10	5.1Ω~220Ω	±1%	-300PPM/°C ≤ TCR ≤ +300PPM/°C	√P.R	6.25√P.R	-55°C ~ 325°C
KNW	15	5.1Ω~220Ω					
KNW	20	10Ω~510Ω					
KNW	25	20Ω~1.2KΩ					
KNW	30	20Ω~1.5KΩ					
KNW	35	24Ω~2KΩ					
KNW	40	24Ω~2.7KΩ					
KNW	45	20Ω~4.3KΩ					
KNW	50	20Ω~4.3KΩ					
KNW	60	20Ω~4.3KΩ					
KNW	75	10Ω~5KΩ					
KNW	80	10Ω~5KΩ					
KNW	100	10Ω~5KΩ					
KNW	120	10Ω~5KΩ					
KNW	150	10Ω~5KΩ					
KNW	180	10Ω~5KΩ					
KNW	200	10Ω~5KΩ					
KNW	250	10Ω~5KΩ					
KNW	300	10Ω~5KΩ					
KNW	350	10Ω~5KΩ					
KNW	400	10Ω~5KΩ					
KNW	500	10Ω~5KΩ					
KNW			±2%				
KNW			±5%				
KNW			±10%				

Derating Curve



● Performance

Test Items	Performance	Test Methods(JIS C 5201-1)
Temperature coefficient	$-300\text{PPM}/^{\circ}\text{C} \leq \text{TCR} \leq +300\text{PPM}/^{\circ}\text{C}$	Test resistance value at normal temperature and normal temperature added 100°C , calculate $^{\circ}\text{C}$ resistance value change rate.
Short-time overload	$\Delta R \leq \pm 2\%R0 + 0.05\Omega$	According 10 times rated power to account the power or max. overload voltage(get the lower) for 5seconds.
Resistance to soldering heat	$\Delta R \leq \pm 1\%R0 + 0.05\Omega$	Immerge into the $350 \pm 10^{\circ}\text{C}$ tin stove for 2~3 seconds
Solderability	Tth soldering area is over 98%	Immerge into the $245 \pm 3^{\circ}\text{C}$ tin stove for 2~3 seconds
Temperature cycle	$\Delta R \leq \pm 2\%R0 + 0.05\Omega$	At -55°C for 30min, then at $+25^{\circ}\text{C}$ for 10~15min, then at $+155^{\circ}\text{C}$ for 30min, then at $+25^{\circ}\text{C}$ for 10~5min, total 5cycles.
Load life in humidity	$\Delta R \leq \pm 5\%R0 + 0.1\Omega$	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5hours on and half-hour off) at the $40 \pm 2^{\circ}\text{C}$ and 90~95% relative humidity.
Load life in heat	$\Delta R \leq \pm 5\%R0 + 0.05\Omega$	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5hours on and half-hour off) at the $70 \pm 2^{\circ}\text{C}$.
Nonflammability	No visible flame	Respectively load AC voltage by 5,10,16 times rated power for 5 minutes.