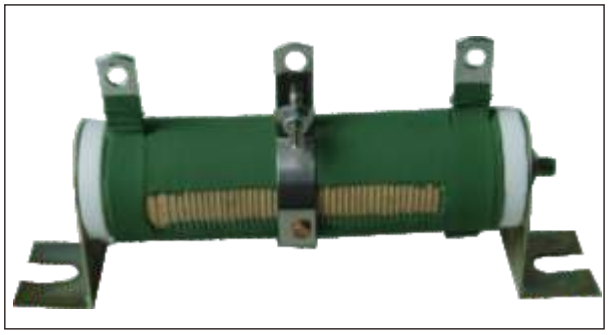
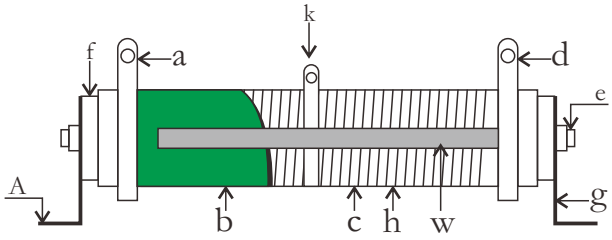
KNW Tube Adjustable Resistor



Features

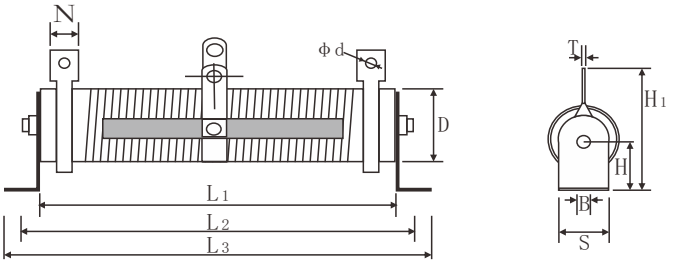
Ⅰ Surface painted,wide power range
Ⅱ Excellent high temperature load performance
Ⅲ Full-welded structure
Ⅳ High reliability
Ⅴ Imported grey and green coating , charactor marking assembly and fittings(available)
Ⅵ Resistance tolerance: ±1%、 ±2%、 ±5%、 ±10%

Construction



adk	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 (W)	Dimensions (mm)										
		L1 ± 2	L2 ± 5	L3 ± 3	D ± 2	B ± 1	H ± 1	H1 ± 3	S ± 2	N ± 0.5	φ d ± 0.5	T ± 0.5
KNW	20	60	75	84	18	5.0	25	34	20	6	3.5	1.0
KNW	25	60	75	84	18	5.0	25	34	20	6	3.5	1.0
KNW	30	82	104	120	20	5.0	25	34	20	6	3.5	1.0
KNW	35	82	104	120	20	5.0	25	34	20	6	3.5	1.0
KNW	40	102	124	146	28	6.5	28	68	28	8	4.5	1.5
KNW	45	102	124	146	28	6.5	28	68	28	8	4.5	1.5
KNW	50	102	124	146	28	6.5	28	68	28	8	4.5	1.5
KNW	60	102	124	146	28	6.5	28	68	28	8	4.5	1.5
KNW	75	152	174	196	28	6.5	28	68	28	8	4.5	1.5
KNW	80	152	174	196	28	6.5	28	68	28	8	4.5	1.5
KNW	100	182	204	226	28	6.5	28	68	28	8	4.5	1.5
KNW	120	225	248	270	28	6.5	28	68	28	8	5.5	2.0
KNW	150	225	248	270	28	6.5	28	68	28	8	5.5	2.0
KNW	180	225	248	270	28	6.5	28	68	28	8	5.5	2.0
KNW	200	225	248	270	28	6.5	28	68	28	8	5.5	2.0
KNW	250	285	304	345	40	6.5	40	85	40	10	5.5	2.0
KNW	300	285	304	345	40	6.5	40	85	40	10	5.5	2.0
KNW	350	316	338	375	40	6.5	40	85	40	10	5.5	2.0
KNW	400	316	338	375	40	6.5	40	85	40	10	5.5	2.0
KNW	500	318	338	378	50	6.5	50	100	50	10	6.0	2.0

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: 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

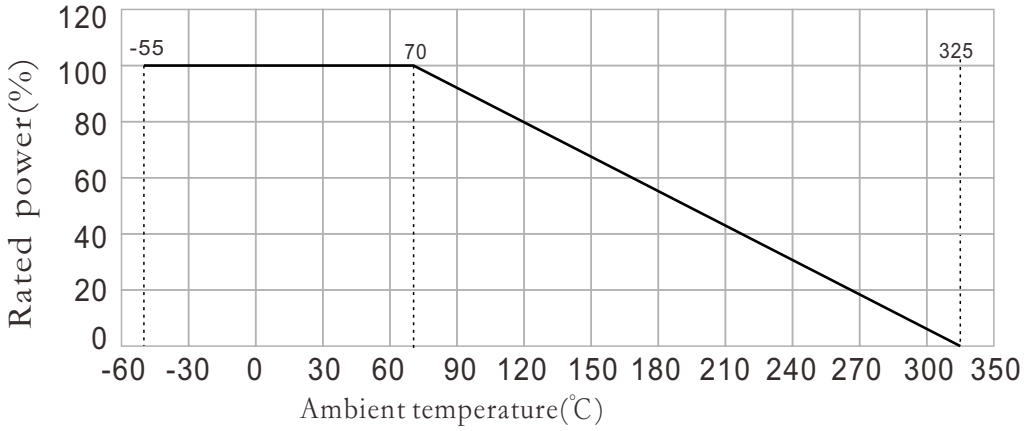
Reference Standards

JISC 5201-1

Applications And Ratings

Type	Power(W)	Resistance Range(Ω)	Tolerance	T.C.R PPM/℃	Max Working Voltage (V)	Max Overload Voltage (V)	Operating Temp.Range
KNW	20	10Ω~510Ω	±1% ±2% ±5% ±10%	-300PPM/℃≤TCR≤+300PPM/℃	$\sqrt{P.R}$	$\sqrt{10\,P\cdot R}$	-55℃~325℃
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					

Derating Curve



Performance

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