

# Oval Flat-Wirewound Power Resistors

**When Limited Space is Required,  
Choose Token's "Thin" Stackable (ZR) Resistors**

## ► Preview

Token oval-shaped ceramic-core resistors feature a low profile to permit installation in spaces with height restrictions.

They are also equipped with integral mounting brackets so they can be fastened to a chassis and stacked in locations with limited surface area. When properly fastened, the mounting brackets add a heat sinking benefit resulting in a smaller size per watt. Durable ZR power resistors are fully welded and coated with lead free non-flammable resin.

ZR resistors are suitable for educational modeling applications, load testing, industrial machinery, electric power distribution, instruments, automation control installations, etc.

The ZR Series is RoHS compliant and lead free. For non-standard technical requirements and custom special applications, please contact us.



### Non-Inductive :

- Ayrton Perry type non-inductive winding is available. When required add "N" to the part number.

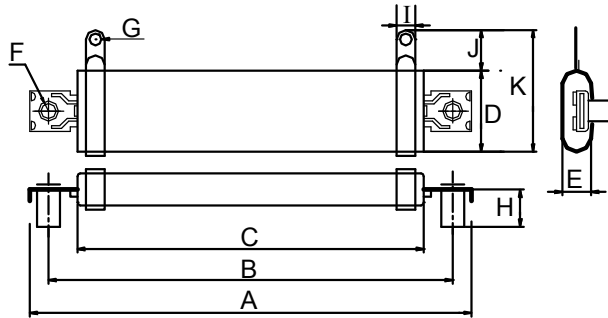
### Construction :

- Wirewound ZR Resistor is a flat tubular ceramic rod has two terminals and is wirewound with either copper wire or chromium alloy wire as a resistance element.
- Mainly utilized for industrial installations where height is limited. Features excellent windings, taps adding, low impedance, and PC board insertable.

### Notes :

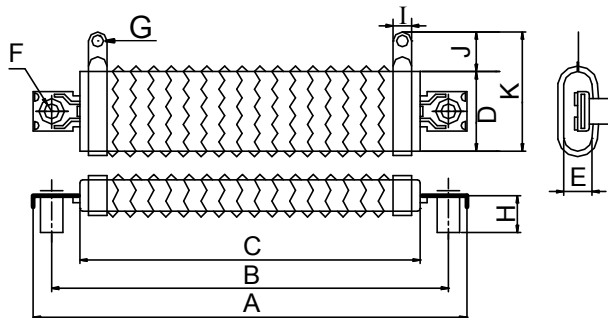
- When resistors are stacked, use washers or spacers as required to insure clearance and improve power dissipation.

## ▶ Set-Type Wirewound (ZDR) 40W ~ 300W Dimensions



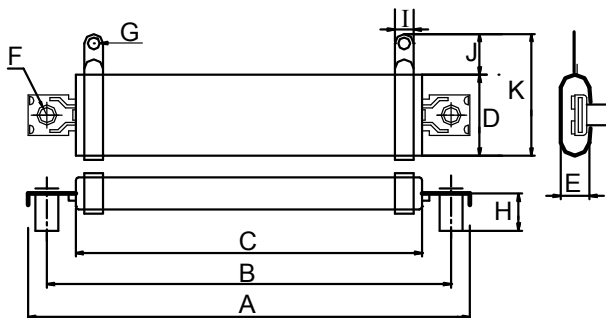
Wattage Rating	Dimensions(mm)											Resistance Range( $\Omega$ )
	A	B	C	D	E	F	G	H	I	J	K	
40W	83	70	50	28	11	5.2	4.1	13	6.5	12	42	0.1~5K $\Omega$
55W	123	110	90	28	11	5.2	4.1	13	6.5	12	42	0.1~6K $\Omega$
70W	153	140	120	28	11	5.2	4.1	13	6.5	12	42	0.1~7K $\Omega$
95W	183	170	150	28	11	5.2	4.1	13	6.5	12	42	0.1~10K $\Omega$
100W	193	180	160	28	11	5.2	4.1	13	6.5	12	42	0.1~12K $\Omega$
120W	218	205	185	28	11	5.2	4.1	13	9	12	42	0.1~15K $\Omega$
150W	218	205	185	35	11	5.2	5.2	13	9	13	48	0.1~18K $\Omega$
200W	243	230	210	35	11	5.2	5.2	13	9	13	48	0.1~25K $\Omega$
250W	287	274	254	35	11	5.2	5.2	13	9	13	48	0.1~30K $\Omega$
300W	333	320	300	35	11	5.2	5.2	13	9	13	48	0.1~35K $\Omega$

## ▶ Wave-Type Wirewound (ZQR) 60W ~ 450W Dimensions



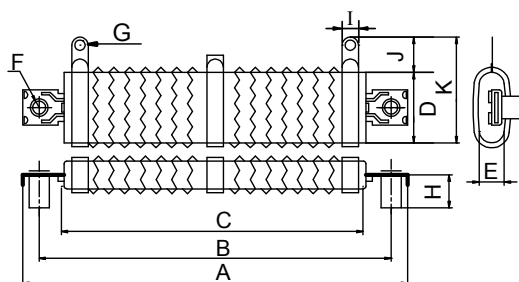
Wattage Rating	Dimensions(mm)											Resistance Range( $\Omega$ )
	A	B	C	D	E	F	G	H	I	J	K	
60W	83	70	50	28	11	5.2	4.1	13	6.5	12	42	1~4 $\Omega$
80W	123	110	90	28	11	5.2	4.1	13	6.5	12	42	1~5 $\Omega$
100W	153	140	120	28	11	5.2	4.1	13	6.5	12	42	1~7 $\Omega$
140W	183	170	150	28	11	5.2	4.1	13	6.5	12	42	1~9 $\Omega$
150W	193	180	160	28	11	5.2	4.1	13	6.5	12	42	1~10 $\Omega$
180W	218	205	185	28	11	5.2	4.1	13	9	12	42	1~12 $\Omega$
225W	218	205	185	35	11	5.2	5.2	13	9	13	48	1~15 $\Omega$
300W	243	230	210	35	11	5.2	5.2	13	9	13	48	1~20 $\Omega$
375W	287	274	254	35	11	5.2	5.2	13	9	13	48	1~25 $\Omega$
450W	333	320	300	35	11	5.2	5.2	13	9	13	48	1~30 $\Omega$

## ► Set-Type Non-Inductive Wirewound (ZDN) 40W ~ 300W Dimensions



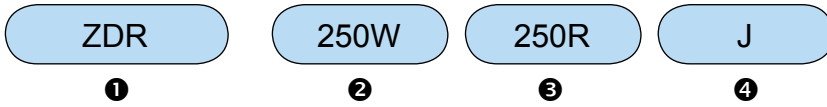
Wattage Rating	Dimensions(mm)											Resistance Range( $\Omega$ )
	A	B	C	D	E	F	G	H	I	J	K	
40W	83	70	50	28	11	5.2	4.1	13	6.5	12	42	0.1~2K $\Omega$
55W	123	110	90	28	11	5.2	4.1	13	6.5	12	42	0.1~2.5K $\Omega$
70W	153	140	120	28	11	5.2	4.1	13	6.5	12	42	0.1~3K $\Omega$
95W	183	170	150	28	11	5.2	4.1	13	6.5	12	42	0.1~4.5K $\Omega$
100W	193	180	160	28	11	5.2	4.1	13	6.5	12	42	0.1~5.5K $\Omega$
120W	218	205	185	28	11	5.2	4.1	13	9	12	42	0.1~7K $\Omega$
150W	218	205	185	35	11	5.2	5.2	13	9	13	48	0.1~8.5K $\Omega$
200W	243	230	210	35	11	5.2	5.2	13	9	13	48	0.1~12K $\Omega$
250W	287	274	254	35	11	5.2	5.2	13	9	13	48	0.1~14K $\Omega$
300W	333	320	300	35	11	5.2	5.2	13	9	13	48	0.1~16K $\Omega$

## ► Wave-Type Wirewound (ZQR) 60W ~ 450W Dimensions



Wattage Rating	Dimensions(mm)											Resistance Range( $\Omega$ )
	A	B	C	D	E	F	G	H	I	J	K	
60W	83	70	50	28	11	5.2	4.1	13	6.5	12	42	1~4 $\Omega$
80W	123	110	90	28	11	5.2	4.1	13	6.5	12	42	1~5 $\Omega$
100W	153	140	120	28	11	5.2	4.1	13	6.5	12	42	1~7 $\Omega$
140W	183	170	150	28	11	5.2	4.1	13	6.5	12	42	1~9 $\Omega$
150W	193	180	160	28	11	5.2	4.1	13	6.5	12	42	1~10 $\Omega$
180W	218	205	185	28	11	5.2	4.1	13	9	12	42	1~12 $\Omega$
225W	218	205	185	35	11	5.2	5.2	13	9	13	48	1~15 $\Omega$
300W	243	230	210	35	11	5.2	5.2	13	9	13	48	1~20 $\Omega$
375W	287	274	254	35	11	5.2	5.2	13	9	13	48	1~25 $\Omega$
450W	333	320	300	35	11	5.2	5.2	13	9	13	48	1~30 $\Omega$

## How to Order



① Part Number: ZDR  
 ZQR  
 ZDN  
 ZQN

② Rated Power (W): 40W~300W  
 60W~450W  
 40W~300W  
 60W~450W

③ Resistance Value ( $\Omega$ ):

Code	Resistance Value
0R1	0.1 $\Omega$
1R	1 $\Omega$
10R	10 $\Omega$
12R	12 $\Omega$
12K	12K $\Omega$

④ Resistance Tolerance (%)

Code	Resistance Tolerance
H	$\pm 3\%$
J	$\pm 5\%$
K	$\pm 10\%$

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