



# Power Resistors

## AL Series - Power Resistors / 线绕大电力铝壳电阻

An aluminum encased consists of an alloy metal coil-type resistance element assembled into an aluminum enclosure. Following high-temperature anodization, the enclosure is filled with a special non-flammable cement paste and after hardening, insulation is applied through a high-temperature process. Since the component is embedded in the heat-proof cement, it is not affected by external mechanical force, dusty environments, and extreme duty. It is durable, vibration-proof, dissipates heat well, and has a low temperature coefficient, with resistance varying in direct proportion. Supporting a flexible range of applications, the product is easy to utilize and install. Applications include industrial machinery, load testing, electric power distribution, instruments, and automated control installations.



For custom specifications, please contact us to discuss the details.

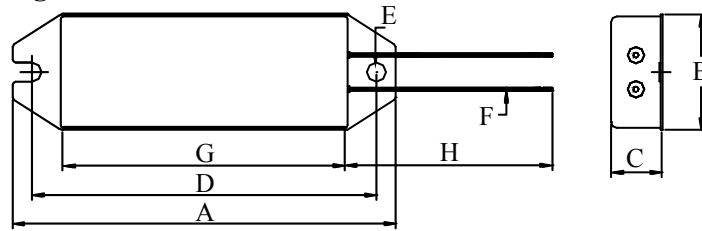
### ► AL Series Resistor Performance Specifications

Test Item	Test Methods	Characteristics
Resistance tolerance	JIS-C-5202 5-1	Resistance Nominal Tolerance $1 \leq R$ $1 > R$ $\pm 5\%(J) \pm 10\%(K)$
Temperature coefficient	JIS-C-5202 5-2	$\pm 400 \text{PPM}/^\circ\text{C MAX}$
Power rating load	JIS-C-5202 5-4	$\Delta R/R \leq \pm(0.5\% + 0.1\Omega)$ Surface temperature up to $350^\circ\text{C MAX}$
Short-term overload	JIS-C-5202 5-5 1000% rated power 5 seconds	Free of appearance or structural irregularity $\Delta R/R \leq \pm(2\% + 0.1\Omega)$
Insulation resistance	JIS-C-5202 5-6 1000VDC	100M $\Omega$ min
Dielectric withstanding voltage	JIS-C-5202 5-7 2000VDC 1 minute	Free of appearance or structural irregularity $\Delta R/R \leq \pm(0.1\% + 0.05\Omega)$
Terminal strength	JIS-C-5202 6-1 8kg 30 seconds	Free of appearance or structural irregularity
Resistor strength	JIS-C-5202 6-2 30kg 30 seconds	Free of appearance or structural irregularity
Vibration	JIS-C-5202 6-3 1.5m/m 10 ~ 50 ~ 10 Hz/min X-Y-Z 2 hours each	Free of appearance or structural irregularity Surface coating crack $\Delta R/R \leq \pm(1\% + 0.05\Omega)$
Thermal shock	JIS-C-5202 7-3 Room temp 30 minutes ON- $55^\circ\text{C}$ 15 minutes OFF	Resistor free of structural irregularity $\Delta R/R \leq \pm(2\% + 0.1\Omega)$
Humidity	JIS-C-5202 7-5 $40^\circ\text{C}$ 90%RH 240 hours	Free of appearance or structural irregularity Surface coating crack $\Delta R/R \leq \pm(3\% + 0.1\Omega)$
Load life	JIS-C-5202 7-10 90 minutes ON - 30 minutes OFF 500 hours	Free of appearance or structural irregularity Surface coating crack $\Delta R/R \leq \pm(3\% + 0.1\Omega)$
Flame retardation	JIS-C-5202 7-13-3-2 100% - 600% rated power load	US UL-94 flame retardation test V-0 grade noncombustible
Remarks	1. Resistance and resistance tolerance were tested in-house with micro resistance meter. 2. Resistor coating refers to UL-certified data provided by supplier	



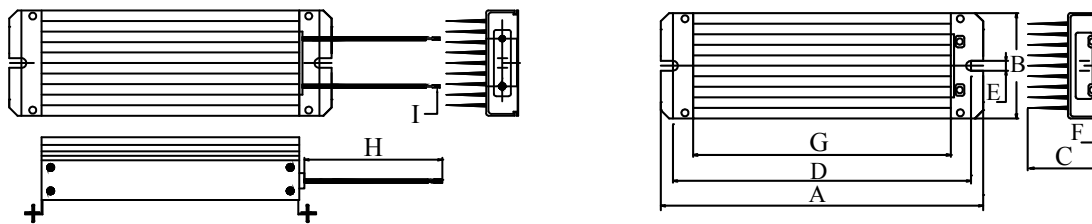
# Power Resistors

## ▶ ASQ Type - High Voltage, Aluminum Encased



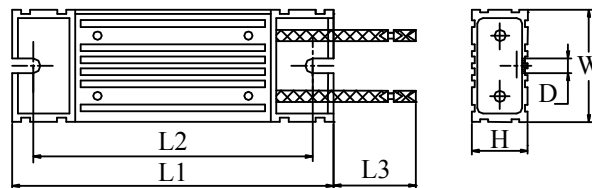
Power Rating	Dimensions(mm)									Resistance Range(Ω)
	A	B	C	D	E	F	G	H	Weight	
60W	100	30	13	90	4.5	0.75mm <sup>2</sup>	75	400	66/g	1-10KΩ
80W	150	34	21	140	5	0.75mm <sup>2</sup>	125	400	170/g	1-10KΩ
120W	182	42	21	172	6	0.75mm <sup>2</sup>	150	400	175/g	1-10KΩ

## ▶ Power Resistor ASH Type - High Voltage, Aluminum Encased



Power Rating	Dimensions(mm)									Resistance Range(Ω)	
	A	B	C	D	E	F	G	H	I		Weight
200W	200	65	45	185	6	M5×8mm	160	300	2mm <sup>2</sup>	725/g	1-10KΩ
300W	280	65	45	265	6	M5×8mm	240	300	2mm <sup>2</sup>	1050/g	1-10KΩ
400W	360	65	45	345	6	M5×8mm	320	300	2mm <sup>2</sup>	1295/g	1-10KΩ
500W	440	65	45	425	6	M5×8mm	400	300	2mm <sup>2</sup>	1650/g	1-10KΩ
600W	520	65	45	505	6	M5×8mm	480	300	2mm <sup>2</sup>	1935/g	1-10KΩ

## ▶ Power Resistor ASZ Type - High Voltage, Aluminum Encased



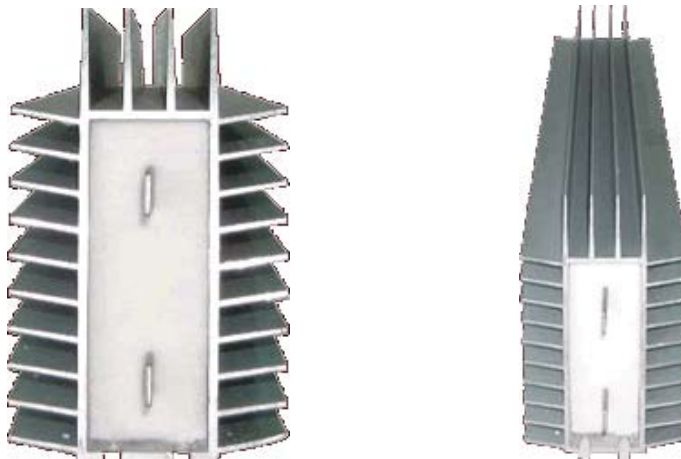
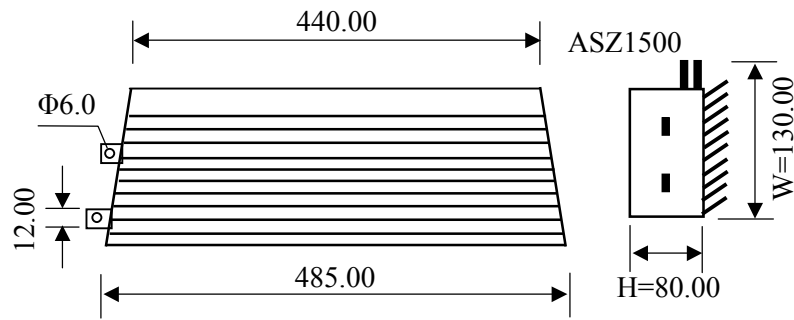
Power Rating	Dimensions (mm)							Resistance Range (Ω)
	W±1	H±1	L±2	L2±2	D±0.5	L3±10	Weight	
60W	40	20	115	100	5.2	200	165/g	2-2KΩ
80W	40	20	140	125	5.2	200	190/g	2-2.5KΩ
100W	40	20	165	150	5.2	200	225/g	2-3KΩ
120W	40	20	190	175	5.2	200	275/g	3-4KΩ
150W	40	20	215	200	5.2	200	310/g	3-5KΩ
200W	60	30	165	150	5.2	300	500/g	3-6KΩ
300W	60	30	215	200	5.2	300	675/g	5-7KΩ
400W	60	30	265	250	5.2	300	850/g	5-8KΩ
600W	60	30	335	320	5.2	300	1070/g	5-9KΩ
800W	60	30	400	385	5.2	300	1250/g	5-10KΩ
1500W	130	80	485	440			4300/g	15-1KΩ

Notice: All dimensions might be changed or modified, please refer to last updating specification.



# Power Resistors

## ▶ ASZ Type - 1500W - High Voltage, Aluminum Encased



## ▶ How to Order



- ❶ Product Type : ASQ type ; ASH type ; ASZ type
- ❷ Rated Power : 60W~120W ; 200W~600W ; 60W~800W
- ❸ Resistance Value ( $\Omega$ ) : ( $\Omega$ ) Indicates resistance value in units of ohms.
- ❹ Resistance Tolerance :

Code	Resistance Tolerance
J	( $\pm 5\%$ )
K	( $\pm 10\%$ )