

Aluminum Encased Wirewound Power Resistors

Power Low Profile Aluminum Encased Resistors (AL)

▶ Preview

Token's flat core winding technology allows for wirewound heatsinkable aluminum housed wirewound resistors affording a very low profile, and superior thermal transfer characteristics when compared to conventional power wirewound resistors.

AL Low Profile Aluminum Encased Series is durable, vibration-proof, dissipates heat well and low temperature coefficient with resistance varying in direct proportion.

The product is easy to utilize and install, and suitable for a wide range applications. Applications include industrial machinery, load testing, electric power distribution, instruments, and automated control installations.

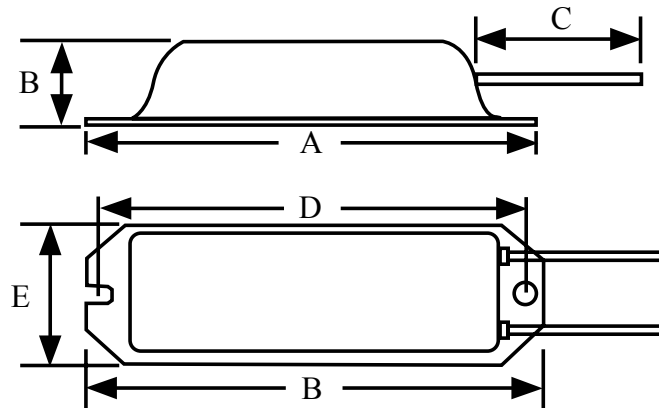
The AL Series is RoHS compliant and lead free. For non-standard technical requirements and custom special applications, please contact us to discuss the details.

Construction :

- An aluminum encased consists of an alloy metal coil-type resistance element assembled into an aluminum enclosure.
- After high-temperature anodization, the enclosure is filled with a special non-flammable cement paste and hardening.
- Insulation is applied through a high-temperature process.
- Since this component is embedded in the heat-proof cement, it is not affected by external mechanical force, and dusty environments.

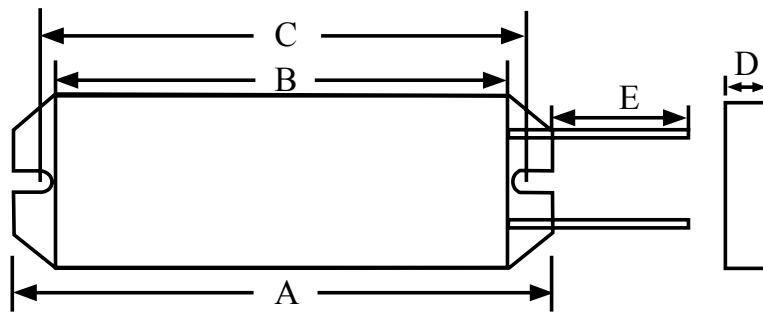


▶ Low Profile, High Power Aluminum Encased (ASP) Dimensions



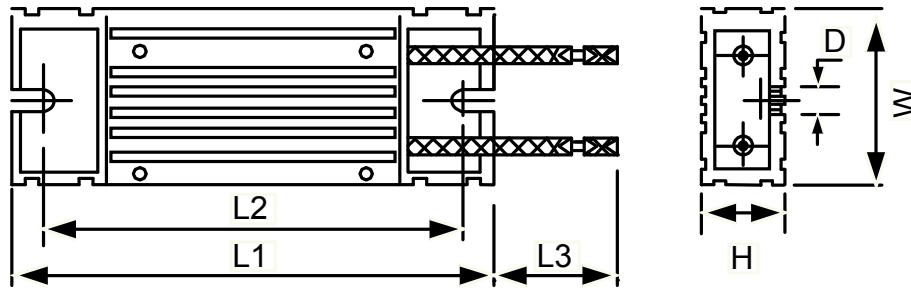
Power Rating	Dimensions (Unit: mm)					Resistance Range(Ω)
	A	B	C	D	E	
60W	100	13	100	90	30	0.1~10K
80W	130	19	100	116	42	0.1~10K
100W	130	19	100	116	42	0.1~10K
120W	130	19	100	116	42	0.1~10K
120W	182	19	100	172	42	0.1~10K

▶ Low Profile, High Power Aluminum Encased (ASP) Dimensions

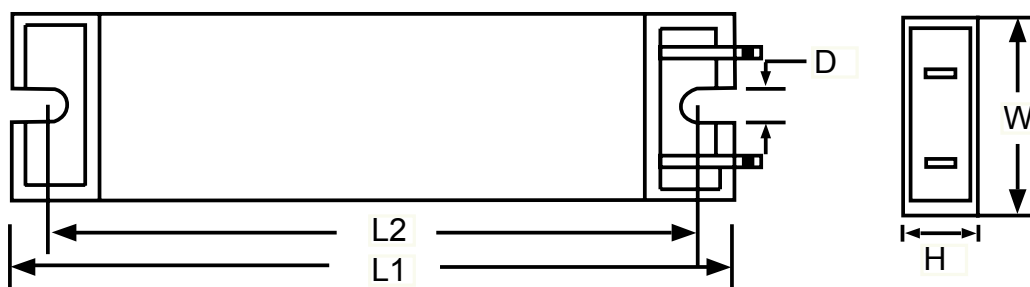


Power Rating	Dimensions (Unit: mm)					Resistance Range(Ω)
	A	B	C	D	E	
60W	100	75	85	8	100	0.1~10K
80W	120	95	105	8	100	0.1~10K
100W	120	95	105	8	100	0.1~10K
120W	150	125	135	8	100	0.1~10K
150W	215	190	200	8	100	0.1~10K

▶ Extended Lead Wire (AHL-150, AHL-150A) Dimensions



High Power with Heat Fin and Heat Sink (ASZ) - A Type Dimensions



High Power with Heat Fin and Heat Sink (ASZ) - B Type Dimensions

Power Rating	Dimensions (Unit: mm)							Resistance Range(Ω)
	W±1.5	H±1.5	L1±2	L2±2	D±0.5	L3±10	TYPE	
40W	40 S	26	90	75	5.2	300	A	0.1~2K
60W	40	26	115	100	5.2	300	A	0.1~2K
80W	40	26	140	125	5.2	300	A	0.1~2K
100W	40	26	140	125	5.2	300	A	0.1~3K
120W	40	26	185	170	5.2	300	A	0.1~5K
150W	40	26	215	200	5.2	300	A	0.1~5K
200W	60	38	165	150	5.2	300	A	0.1~5K
250W	60	38	165	150	5.2	300	A	0.1~10K
300W	60	38	215	200	5.2	300	A	0.1~10K
400W	60	38	265	250	5.2	300	A	0.1~10K
500W	60	38	335	320	5.2	300	A	0.1~10K
600W	60	38	335	320	5.2	300	A	0.1~10K
800W	60	38	365	350	5.2	300	A	0.1~10K
1000W	44	76	335	320	5.2		B	0.1~10K
1200W	44	76	400	385	5.2		B	0.1~10K
1500W	44	76	500	485	5.2		B	0.1~10K
1800W	44	76	500	485	5.2		B	0.1~10K
2000W	44	76	550	535	5.2		B	0.1~10K

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

▶ Performance Specifications

Test Item	Test Methods	Characteristics
Resistance tolerance	JIS-C-5202 5-1	Resistance Nominal Tolerance 1≤R 1>R ±5%(J) ±10%(K)
Temperature coefficient	JIS-C-5202 5-2	±400PPM/°C MAX
Power rating load	JIS-C-5202 5-4	ΔR/R≤±(0.5%+0.1Ω) Surface temperature up 350°C MAX
Short-term overload	JIS-C-5202 5-5 1000% rated power 5 seconds	Free of appearance or structural irregularity ΔR/R≤±(2%+0.1Ω)
Insulation resistance	JIS-C-5202 5-6 1000VDC	100MΩ min
Dielectric withstanding voltage	JIS-C-5202 5-7 2000VDC 1 minute	Free of appearance or structural irregularity ΔR/R≤±(0.1%+0.05Ω)
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 ΔR/R≤±(1%+0.05Ω)
Thermal shock	JIS-C-5202 7-3 Room temp 30 minutes ON-55°C 15 minutes OFF	Resistor free of structural irregularity ΔR/R≤±(2%+0.1Ω)
Humidity	JIS-C-5202 7-5 40°C 90%RH 240 hours	Free of appearance or structural irregularity Surface coating crack ΔR/R≤±(3%+0.1Ω)
Load life	JIS-C-5202 7-10 90 minutes ON - 30 minutes OFF 500 hours	Free of appearance or structural irregularity Surface coating crack ΔR/R≤±(3%+0.1Ω)
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	

▶ How to Order

ASQ

①

400W

②

20R

③

K

④

① Part Number: ASQ

ASP

ASZ

② Rated Power (W): 60W~120W

60W~150W

40W~2000W

③ Resistance Value (Ω): Indicates resistance value in units of ohms.

④ Resistance Tolerance (%)

Code	Resistance Tolerance
J	±5%
K	±10%

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