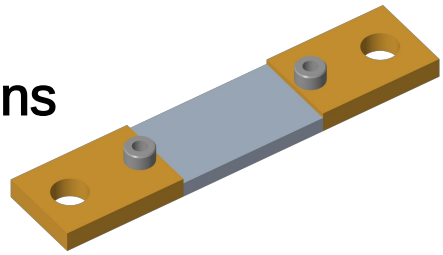
HoFL3T Series Shunt Selection Specifications



High stability brought by precision alloy

The shunt is used for current detection, and the detection current can range from hundreds of amperes to t housands of amperes. Due to its special alloy material, the shunt has good long-term stability and can withstand pulse current shocks several times higher than the rated current without damage.

Temperature coefficient is critical for current sensing applications

The resistance and surface temperature of a shunt vary continuously with the current applied. Factors contributing to this resistance change include the resistance temperature coefficient (RTC) and dimensional changes caused by thermal expansion. When heat generation and heat dissipation reach a dynamic equilibrium, the shunt's resistance stabilizes.

However, excessively large current coefficients can cause the shunt's resistance to vary beyond its nominal accuracy The shunt's specialized doping, fabrication, and heat treatment processes result in a low current coefficient and excellent compensation characteristics.

Low thermal potential and low inductance

Because the voltage sampling point is always a certain distance from the resistor's heating center, resulting in a temperature difference between the two, a low thermoelectric potential is crucial. The shunt's effect on copper thermoelectric potential is less than 0.5μV/°C, minimally impacting millivolt-level voltage output. The shunt's flat structure results in an inductance of less than 3nH, ensuring excellent performance even at high frequencies.

Example：HoFL3T-100A75mVF1042225WQ

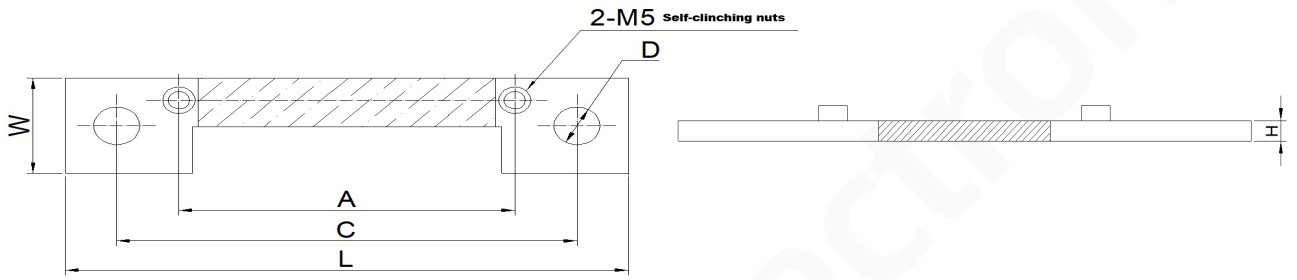
Ho	FL3T	100A	75mV	F	1042225	W	Q	_
↓	↓	↓	↓	↓	↓	↓	↓	

Manufacturer	Series	Rated Current	Rated Voltage	Tolerance	Product Size	Surface treatment	Plating area	
Ho Milliohm Electronic	FL3T	50A~1500A	75mV	A=±0.1% C=±0.2% D=±0.5% F=±1% J=±5%	L: 085=85mm 120=120mm W: 18=18mm 22=22mm T: 25=2.5mm	L = Tin coating W = Mist coating N = Nickel Q = Paint B = Not Required	Q = Fully plated J=Partially plated B=No required	

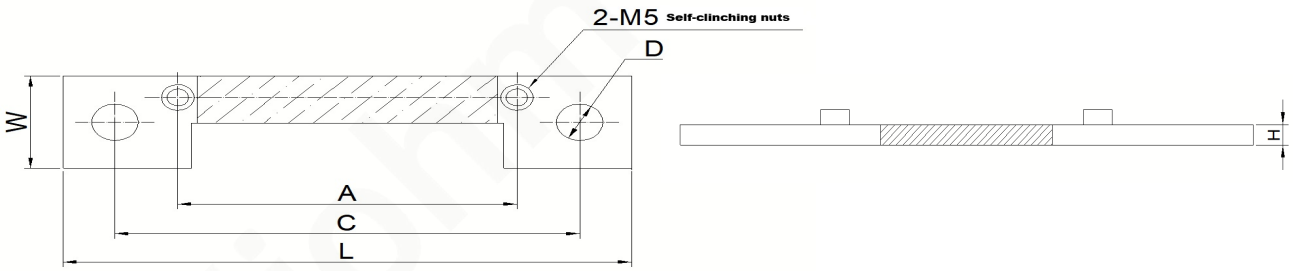
Note: Other part number can be customized by contacting the manufacturer

Features	Applications
The product has high precision,strong reliability, high overload capacity, high stability, wide operating temperature range and non-inductive design that meets Rohs requirements.	BMS, current sensing for power electronics, inverters,UPS, motor control, and electronic loads.

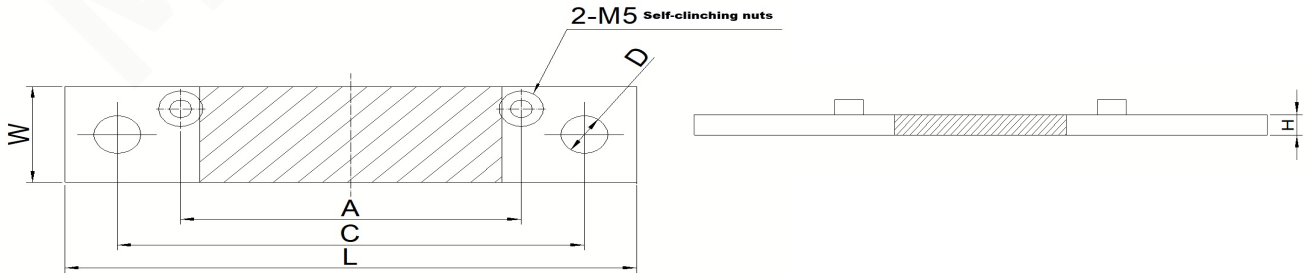
Product Size（unit：mm）



Part Number	L	W	C	H	D	A
50A-75mV	104±2	21.6±1	85±0.5	2±0.5	2*Φ8.5±0.5	62±1

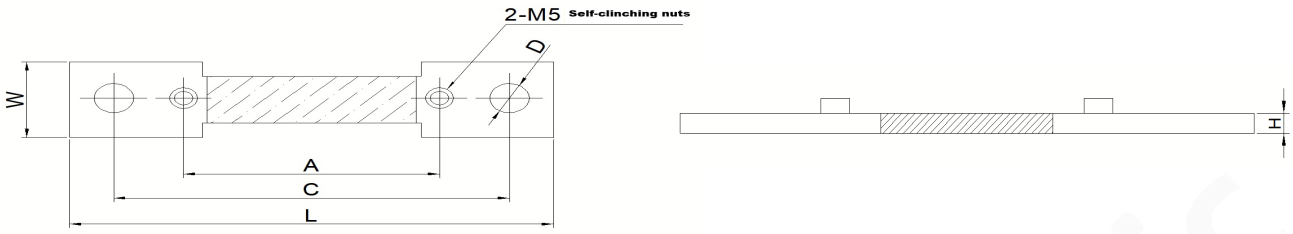


Part Number	L	W	C	H	D	A
75A-75mV	104±2	21.6±1	85±0.5	2±0.5	2*Φ8.5±0.5	62±1

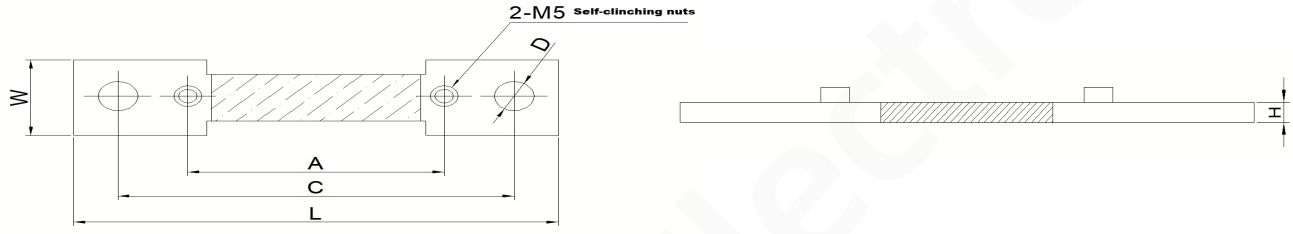


Part Number	L	W	C	H	D	A
100A-75mV	104±2	21.6±1	85±0.5	2±0.5	2*Φ8.5±0.5	62±1

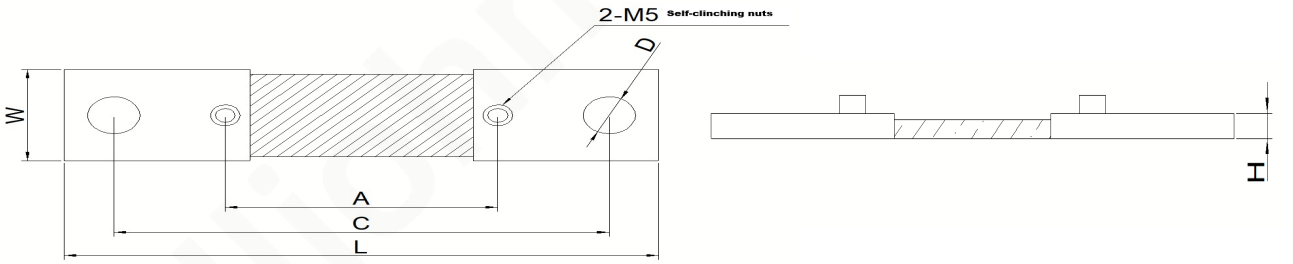
Product Size（unit：mm）



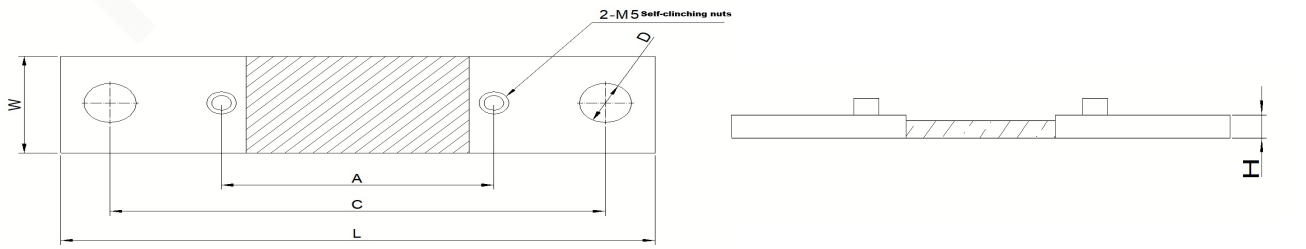
Part Number	L	W	C	H	D	A
150A-75mV	104±2	22±1	85±0.5	3±0.5	2*Φ8.5±0.5	55±1



Part Number	L	W	C	H	D	A
200A-75mV	104±2	22±1	85±0.5	3±0.5	2*Φ8.5±0.5	55±1

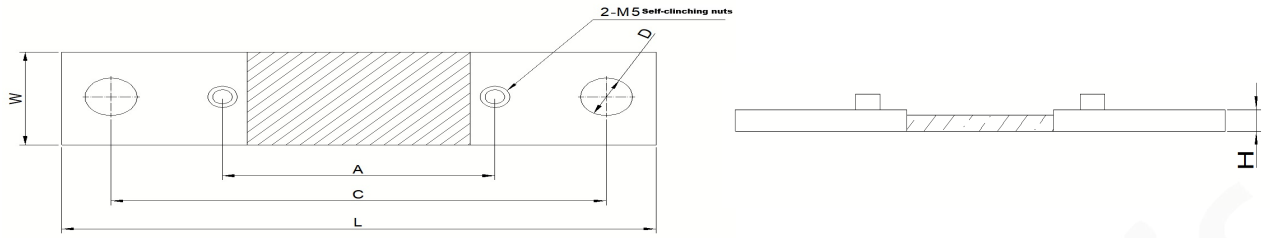


Part Number	L	W	C	H	D	A
250A-75mV	120±2	26±1	100±1	4±0.5	2*Φ10.5±0.5	55±1

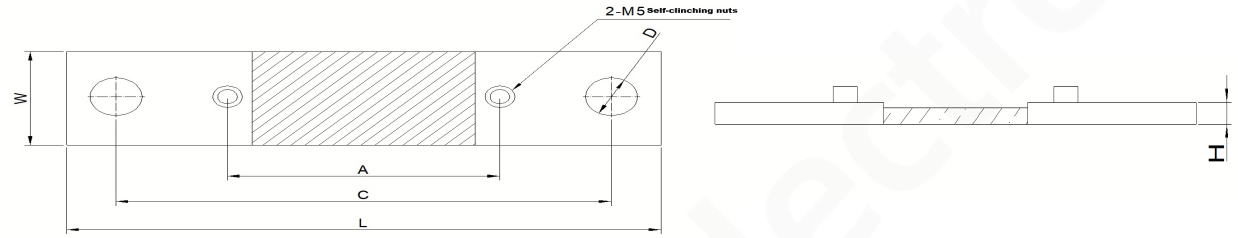


Part Number	L	W	C	H	D	A
300A-75mV	120±2	26±1	100±1	4±0.5	2*Φ10.5±0.5	55±1

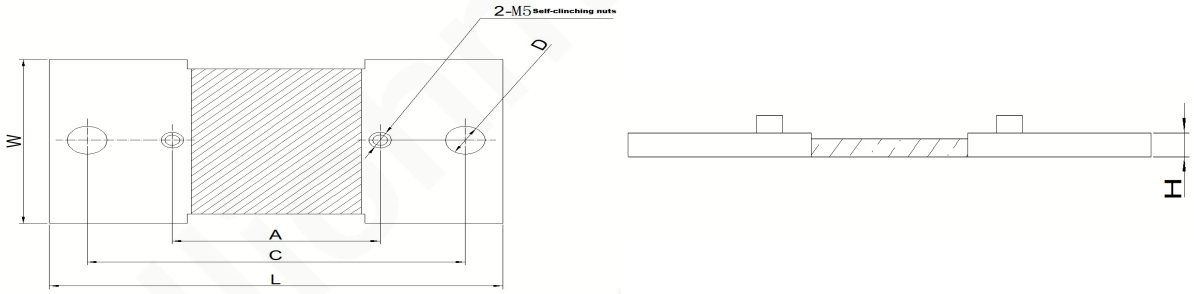
Product Size（unit：mm）



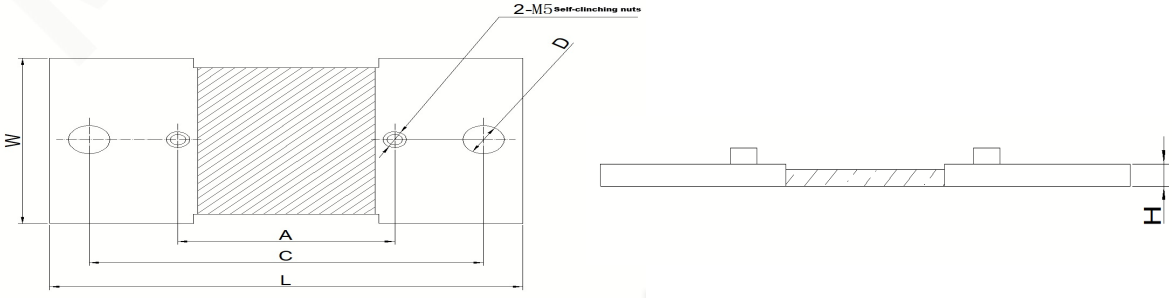
Part Number	L	W	C	H	D	A
400A-75mV	120±2	38±1	100±1	4±0.5	2*Φ10.5±0.5	55±1



Part Number	L	W	C	H	D	A
500A-75mV	120±2	45±1	100±1	4±0.5	2*Φ10.5±0.5	55±1

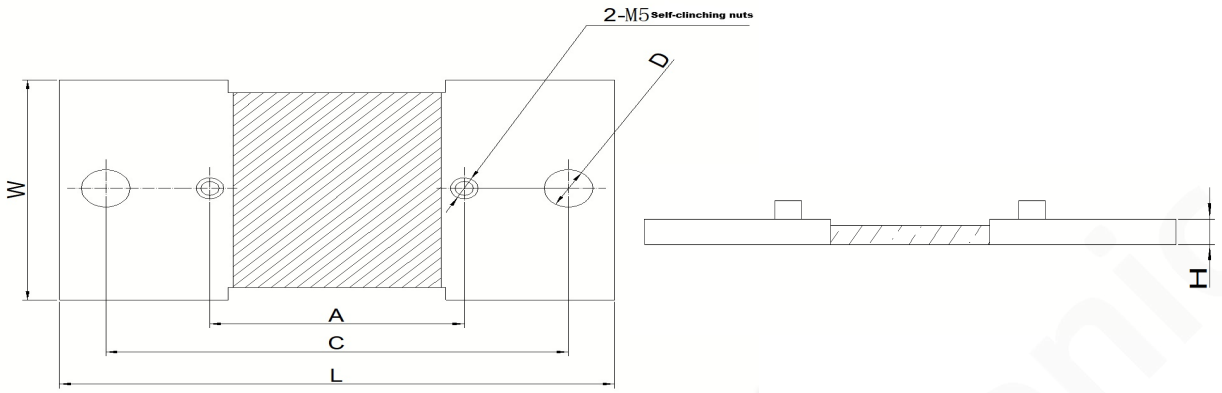


Part Number	L	W	C	H	D	A
600A-75mV	120±2	62±2	100±1	4±0.5	2*Φ10.5±0.5	55±1

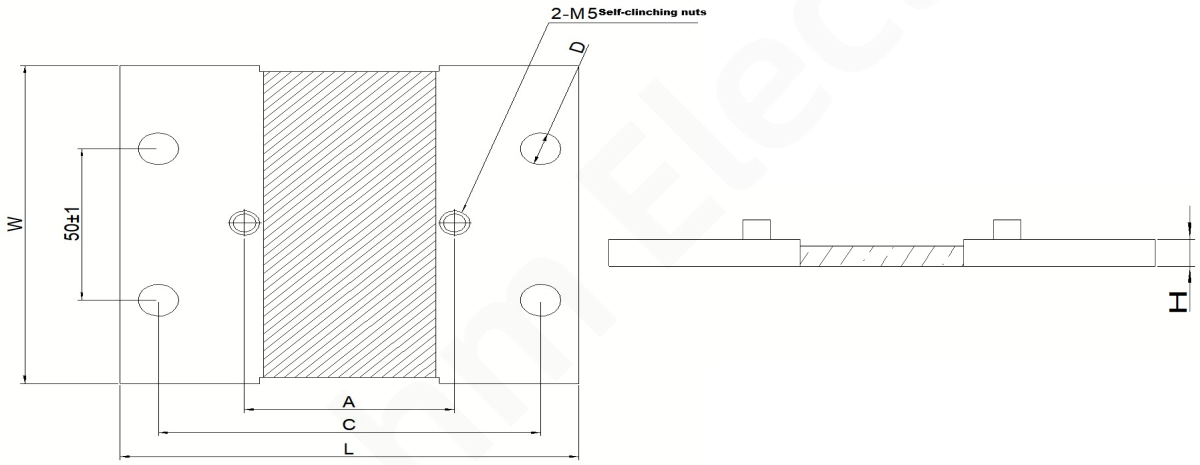


Part Number	L	W	C	H	D	A
700A-75mV	120±2	75±2	100±1	4±0.5	2*Φ10.5±0.5	55±1

Product Size（unit：mm）

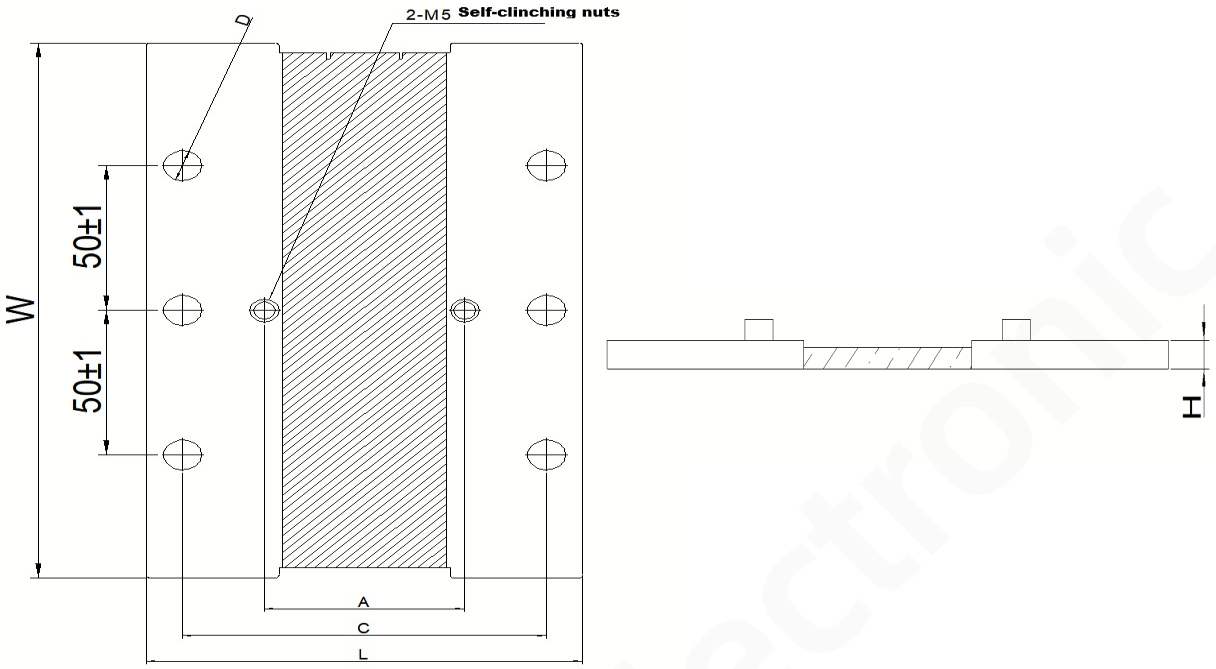


Part Number	L	W	C	H	D	A
800A-75mV	120±2	85±2	100±1	4±0.5	2*Φ10.5±0.5	55±1



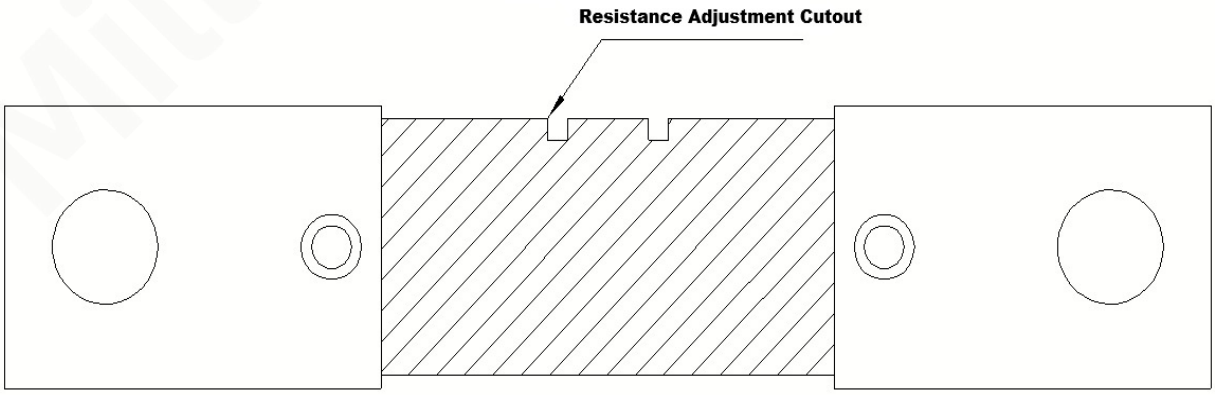
Part Number	L	W	C	H	D	A
1000A-75mV	120±2	105±2	100±1	4±0.5	4*Φ10.5±0.5	55±1

Product Size（unit：mm）



Part Number	L	W	C	H	D	A
1500A-75mV	120±2	150±2	100±1	4±0.5	4*Φ10.5±0.5	55±1

Note: All of the above products may have resistance adjustment cutouts. The purpose of the cutouts is to adjust product precision and has no effect on other product performance. For some products whose original precision meets the requirements, no cutout adjustment is required. The size, shape, and number of the cutouts are determined by the manufacturer. Examples of cutouts are as follows:

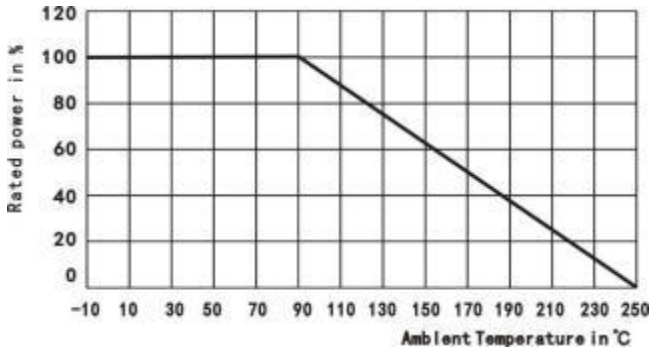


Parameters	
Rated Power	50A~1500A
Voltage Drop	75mV
Tolerance Class	0.1%~5%
T.C.R(ppm/℃)	≤50
Alloy Material	National Standard Precision Alloy
Copper Material	National Standard Copper
Operating Temperature	-55℃~+170℃

Performance Test

Item	Conditions of testing	Resistance Range
Thermal shock	-40℃ to +150℃, 1000 cycles, 15 minutes at each extreme	±0.5%R
Short-term overload	2.5 times rated power, lasting 5 seconds	±0.5%R
Low temperature operation	-40°C, 45 minutes	±1.0%R
High temperature exposure	1000 hours at +170°C	±1.0%R
Deviation humidity	+85℃, 85%RH, 10% deviation, 1000 hours	±1.0%R
Mechanical shock	100 ms, 6 ms, 5 pulses	±0.5%R
Vibration	Frequency changes from 10Hz to 2000Hz in 1 minute, 3 directions, 12 hours	±1.0%
Load life	1000 hours at +70°C, 1.5 hours "on", 0.5 hours "off"	±0.5%
Moisture-proof	MIL-STD-202	±0.5%

Power curve

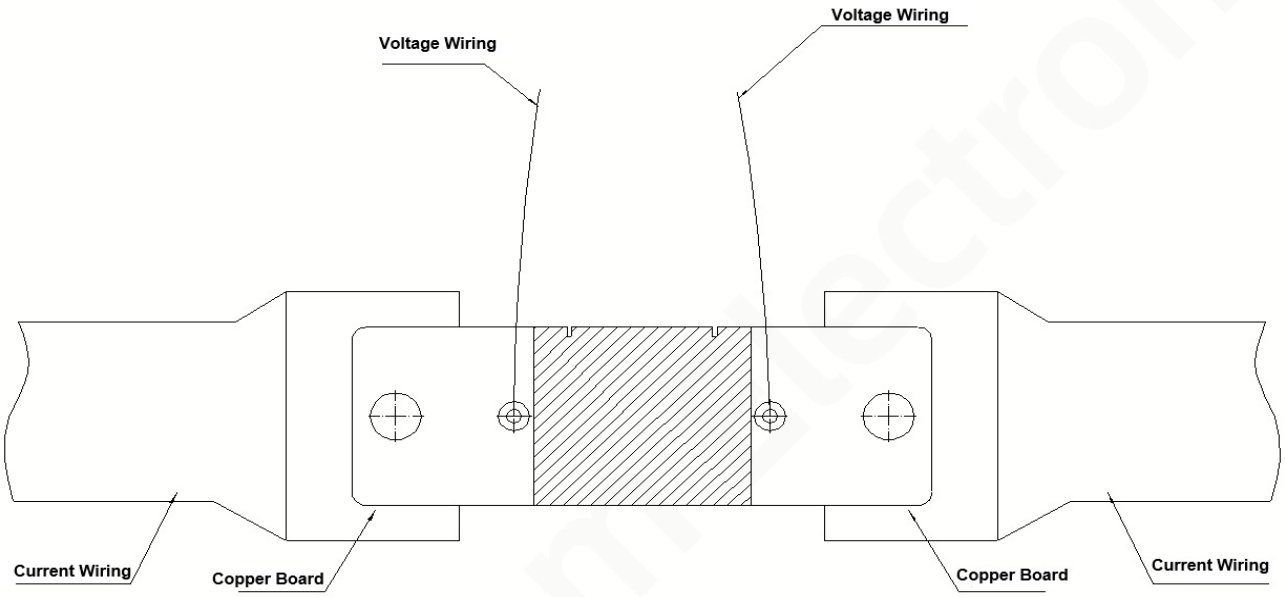


Operating temperature range -55 ~ +170 ℃, power reduction diagram when the resistor temperature reaches 70 ℃

Precautions

1. Assembly Orientation: The silkscreen printed side of the product should be facing up during assembly.
2. Optimal Assembly Time: The optimal assembly time is one to three months at room temperature , and can be extended to six months if the product packaging is properly sealed. During this optimal assembly time, the product surface will be smooth, bright, and free of rust. Exceeding this time, or if the product packaging seal is damaged, or if the product is stored in a warehouse with excessive humidity, may cause oxidation on the product surface.
3. The product should be stored in an ambient temperature of 5-35°C and a humidity of <65% RH, and humidity should be kept as low as possible.
4. Product Packaging and Assembly: Wear gloves or finger cots during assembly.

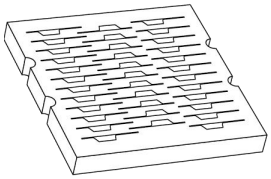
Assembly diagram



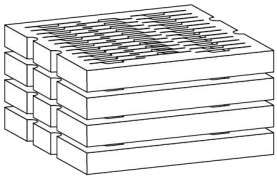
Packing method

1. The product is packed in a pearl-shaped cotton ball.
2. Each bundle contains 4 trays.
3. Each bundle must be heat-sealed with plastic film.
4. Each box must be sealed with transparent tape and placed in a cardboard box.

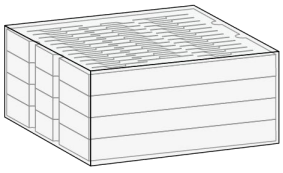
Packing Example



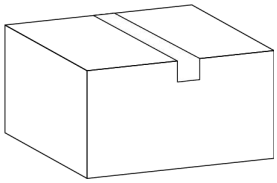
1. Each plate of product



2. Each 4 plates make a bundle



3. Each bundle of products needs to be heat-sealed with plastic film



4. Each box is sealed with transparent tape and placed in a carton

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