



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

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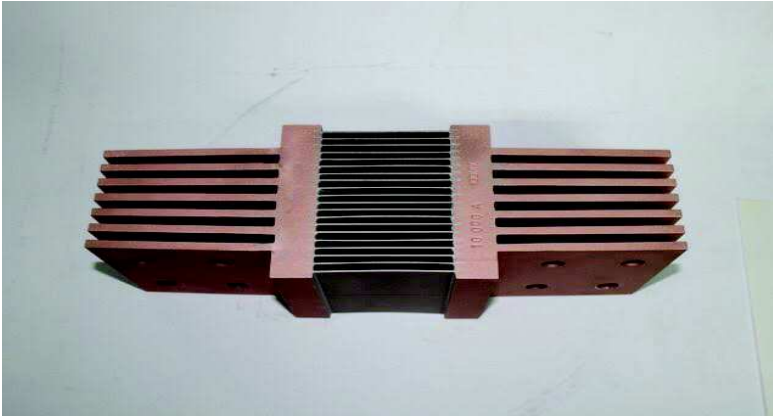
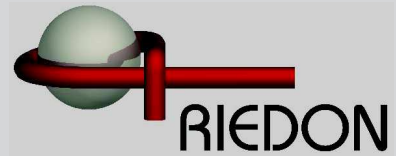
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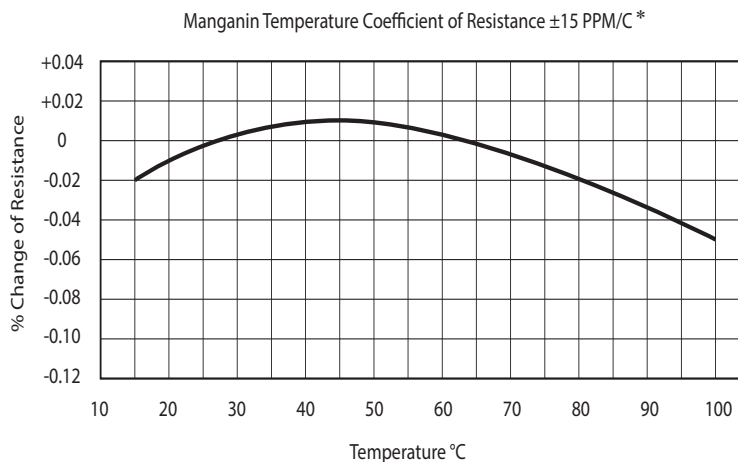
RSL Series

DC Ammeter Shunts / Busbar Shunts
2,500 Amp - 10,000 Amp



- 2,500 Amp to 10,000 Amp
- 0.005 mOhm to 0.02 mOhm
- 0.25% Tolerance
- Calibration Certificate Available

SPECIFICATIONS	
Rated Output	50mV, 100mV, Custom
Voltage Tolerance	±0.25% Standard
Operating Temp.	+30°C to +70°C
Storage Temp.	-55°C to 80°C
Materials	Resistance Element: Manganin Terminal Block RSL: Copper



*Applies to resistance element only

Operating Current Derating: For continuous operation, it is recommended that shunts are not run at more than two thirds (2/3) the rated current under normal conditions per IEEE standards for DC instrument shunts. At ambient temperatures above 40°C, the current must be further derated to prevent damage.

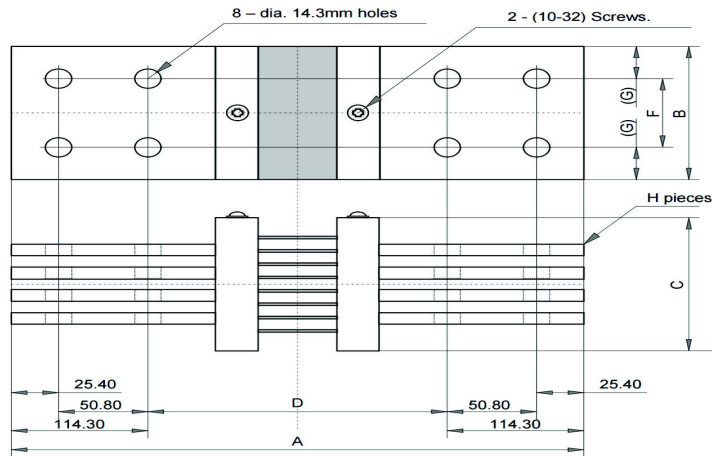
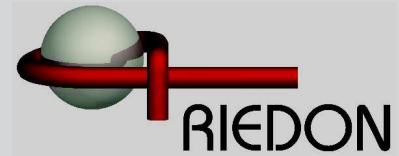
Ordering Information

Part Description: Part Type - Voltage Output (mV)

Example: RSL - 2500 - 50

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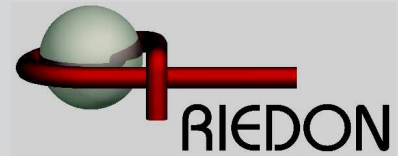
Thickness and gap of terminal blades are equal as 6.35mm.

*Dimension tolerances: $\pm 0.381\text{mm}$ for hole diameters. All other dimensions have a $\pm 0.762\text{mm}$ tolerance

50mV Output										
Rated Current - Out (mV)	Rated Current (A)	Operating Current (A)	Resistance (m Ω)	Dimensions (mm)						
				A	B	C	D	F	G	H
RSL-2500-50	2500	1666.67	0.02	320.68	101.6	38.1	168.28	50.8	25.4	2
RSL-3000-50	3000	2000	0.0167	320.68	101.6	50.8	168.28	50.8	25.4	3
RSL-4000-50	4000	2666.67	0.0125	320.68	101.6	76.2	168.28	50.8	25.4	4
RSL-4500-50	4500	3000	0.011	320.68	101.6	76.2	168.28	50.8	25.4	4
RSL-5000-50	5000	3333.3	0.01	320.68	101.6	76.2	168.28	50.8	25.4	4
RSL-6000-50	6000	4000	0.0083	320.68	101.6	101.6	168.28	50.8	25.4	5
RSL-7000-50	7000	4666.67	0.00714	320.68	127	101.6	168.28	63.5	31.75	5
RSL-7500-50	7500	5000	0.0067	320.68	127	101.6	168.28	63.5	31.75	6
RSL-8000-50	8000	5333.33	0.0063	320.68	127	101.6	168.28	63.5	31.75	6
RSL-9000-50	9000	6000	0.0056	320.68	127	101.6	168.28	63.5	31.75	6
RSL-10000-50	10000	6666.67	0.005	320.68	127	127	168.28	50.8	31.75	7
100mV Output										
Rated Current - Out (mV)	Rated Current (A)	Operating Current (A)	Resistance (m Ω)	Dimensions (mm)						
				A	B	C	D	F	G	H
RSL-2500-100	2500	1666.67	0.04	361.95	101.6	38.1	209.55	50.8	25.4	2
RSL-3000-100	3000	2000	0.0334	361.95	101.6	50.8	209.55	50.8	25.4	3
RSL-4000-100	4000	2666.67	0.025	361.95	101.6	76.2	209.55	50.8	25.4	4
RSL-4500-100	4500	3000	0.022	361.95	101.6	76.2	209.55	50.8	25.4	4
RSL-5000-100	5000	3333.3	0.02	361.95	101.6	76.2	209.55	50.8	25.4	4
RSL-6000-100	6000	4000	0.0167	361.95	101.6	101.6	209.55	50.8	25.4	5
RSL-7000-100	7000	4666.67	0.0143	361.95	127	101.6	209.55	63.5	31.75	5
RSL-7500-100	7500	5000	0.0133	361.95	127	101.6	209.55	63.5	31.75	6
RSL-8000-100	8000	5333.33	0.0125	361.95	127	101.6	209.55	63.5	31.75	6
RSL-9000-100	9000	6000	0.0111	361.95	127	101.6	209.55	63.5	31.75	6
RSL-10000-100	10000	6666.67	0.01	361.95	127	127	209.55	63.5	31.75	7

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TECHNICAL NOTES

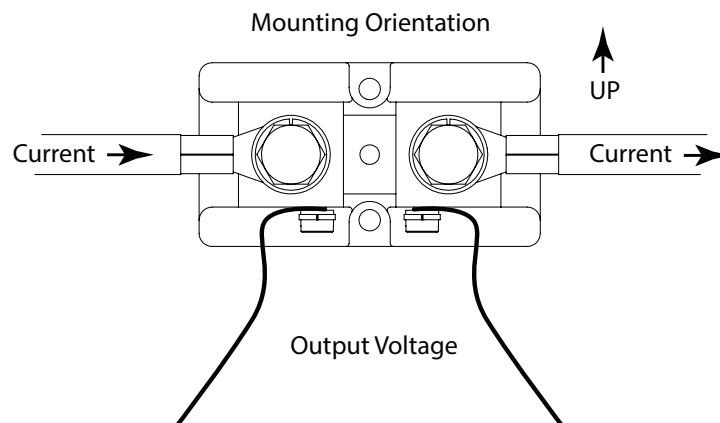
Mounting: Shunts should be mounted with manganin resistive blades in a vertical position in order to promote the free convectational flow of air. If vertical mounting is not practical, forced air cooling or adding heat sinks to the blocks can reduce the operating temperature. The manganin blades must never exceed +145°C, otherwise permanent resistance change may occur.

When current of 100A or greater is passing through the shunt, the major portion of heat generated is dissipated by conduction through the shunt terminal blocks into the connecting buss bar or cable. Therefore it is necessary to insure that good contact is made between the shunt terminal blocks and the conductor terminals and that the conductors have adequate cross section to keep the temperature of the shunt from exceeding 145°C (125°C recommended).

If the shunt is mounted in an enclosure, care must be taken to ensure adequate cooling. If the power density is greater than 1/4 watt per square inch of the enclosure surface for all enclosed devices, additional cooling must be supplied in the form of air vents or fans.

Shunts also must be installed in a way that protects them from thermal expansion forces produced from buss bar or short-circuit forces. Flexible wiring may be required in high pulse current, high vibration, or high temperature applications.

Where possible, all shunts should be mounted on the ground side of the circuit. For circuits above 750VDC, RS shunts **must** be mounted on the ground side due to the dielectric strength of the shunt base.



Operating Current Derating: For continuous operation, it is recommended that shunts are not run at more than two thirds (2/3) the rated current under normal conditions per IEEE standards for DC instrument shunts. At ambient temperatures above 40°C, the current must be further derated to prevent damage.

Pulse Operation: Shunts that do not need continuous operation and are only exposed to intermittent pulses can be operated at levels above their rated current for short periods of times. Pulses are limited to the maximum temperature of the blades not exceeding 145°C (125°C recommended). Many variables such as ambient temperature, cross section of the current carrying conductors, and pulse duration make calculating exact values difficult. Shunt size will need to be validated by customer for pulse current and duty cycle on a case by case basis.