MULTIPLE CURRENT SHUNT – TEMPERATURE STABILIZED

- *IMPROVED ACCURACY*
- *WIDE RANGE: <0.1 A TO 300 A*
- *HIGH IMMUNITY FROM AMBIENT TEMPERATURE CHANGES*
- *DC OR AC USE*
- *TRANSPORTABLE*

Model MCS Temperature Stabilized Multiple Current Shunt

Ohm-Labs' innovative model MCS Multiple Current Shunt is designed to reduce the main uncertainty in accurate current measurement.

Traditional current shunts generate heat under power. Heat changes their resistance, and thus their voltage output. Various strategies – finned designs, even adding fans – have been tried to reduce errors from self-heating.

The MCS thermally bonds cooling modules to the shunts themselves. A thermistor embedded in the shunt monitors temperature. As the temperature rises with the application of current, the cooling modules remove heat, reducing the major source of uncertainty in current measurement.

10 K thermistors allow the user to monitor the temperature of each shunt during use.

All shunts in the MCS are of bifilar construction, for close conformance between DC and AC measurement.

ISO17025 accredited, traceable calibration is included through the full current range of each shunt.

For less than the cost of five separate precision shunts, the MCS provides superior performance and greater versatility.

MCS Condensed Specifications

Current (I)	Resistance in Ohms	Volts at Rated I	Accuracy in %
3 A	1	3	<0.01
10 A	0.1	1	
30 A	0.01	0.3	
100 A	0.001	0.1	
300 A	0.000 1	0.03	<0.05

Stated accuracy is at time of manufacture
Temperature Coefficient of Resistance: <5 ppm / °C
TCR is change in resistance from 15° to 40°C
Power coefficient (ppm/W): 1Ω <1; 0.1Ω <2; 0.01Ω <5; 0.001Ω <10; 0.000 1Ω <30
12-month stability typically <10 ppm
Connections: Potential: Low thermal EMF binding posts
Current: 3/10/30 A: gold plated binding posts
100 A: 3/8-16 silicon-bronze posts
300 A: ½-13 silicon-bronze posts
Thermistors: Mini-banana jacks
Power: 100-240 VAC, 50/60 Hz
Physical: 47x15x46 cm (17.75x5.25x18.25 in) 3U
Weight: 20 kg / 44 lbs
Warrantee: 2 years
Accessories: Power cord, spare fuses
Options: Current & potential cables, transit container

For traditional, passive shunts, please see our CS-series, or our line of low resistance standards.

ACCREDITED
CERTIFICATE #2481.01

-LABS
Excellence in Resistance

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