

D.C. mV METER SHUNT

What Type MS means to you:

Resistance Value from 0.001Ω to 100Ω
 Tolerances to ±0.005%
 TCR Characteristics to ±10ppm/°C
 Temperature Span -65 to +275°C
 DC Current to 50 Amps Max.
 2 & 4 Terminals for power or current-sensing

Type MS-40

(0.001Ω ±0.5% shunt) lets you quickly test current up to 40 Amps with a standard multimeter.

PHYSICAL SPECS:

Length 1.50"
 Height 2.00"
 Width 0.65"
 Terminals 0.75"
 (Center-to-center)

Input/Output Conversion Chart

1 Amp = 1mV
 2 Amps = 2mVs
 5 Amps = 5mVs
 7 Amps = 7mVs
 10 Amps = 10mVs
 20 Amps = 20mVs
 30 Amps = 30mVs
 40 Amps = 40mVs



The MS Series Shunts can be custom-made for 50mV & 100mV applications. The values below are typical values for the 50mV shunts using the Volt Drop Method :

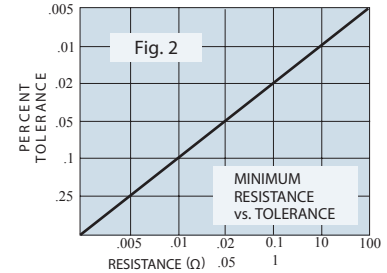
Ω (R)	Current (I)	Watts (P)
0.001	50A	2.50W
0.002	25A	1.25W
0.003	16.7A	0.83W
0.004	12.5A	0.62W
0.005	10A	0.5W
0.006	8.3A	0.42W
0.007	7.14A	0.36W
0.008	6.25A	0.31W
0.009	5.5A	0.28W
0.010	5A	0.25W
0.020	2.5A	0.125W
0.025	2A	0.1W
0.030	1.67A	0.08W
0.040	1.25A	0.06W
0.050	1A	0.05W
0.100	0.5A	0.025W
0.200	0.25A	0.0125W
0.250	0.2A	0.01W
0.500	0.1A	0.005W
1.00	0.05A	0.0025W

OHM'S LAW FORMULAS

$$I = (E/R), (P/E), (\sqrt{P/R}) \quad P = (E^2/R), (EI), (I^2R)$$

$$R = (E/I), (E^2/P), (P^2/I) \quad E = (IR), (P/I), (\sqrt{PR})$$

Min. Resistance Vs. Resistance Tol.



ENGINEERING DATA:

- POWER RATINGS: 10 WATTS MAXIMUM**
 All resistance values at full power are based upon ±1% resistance tolerance at 25°C. Derating is required or higher temperatures and/or closer tolerances.
- RESISTANCE AND TOLERANCES:**
 0.001Ω to 100Ω in any specified value or decimal part of an ohm - to ±0.005% - see Fig. 2 (Min. Resistance vs. Resistance Tolerance).
- TCR CHARACTERISTICS:**
 to 0±10 ppm/°C
- TERMINALS:**
 Heavy-duty commercially pure copper test leads match current rating of shunt selected. Also Four(4) low EMF copper terminals are available for very accurate current-sensing applications.
- MARKING:**
 PRC symbol, type, resistance, value, tolerance and terminal. Custom marking, if specified.
 e.g. MS-40A = 0.001Ω (to 40 amps).



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