

>185.85546 67612.23-2829 955 56
>198.65546 65612.23-2829 955 56
>152.698016 68818.28-2399 92356
>198.643636 78617.73-2289 783 56
>124.634546 78672.23-7779 683 56
>458.11142 83417.73-2397 876 56
>145.523286 64486.22-2689 986 56
>140.77060 32814.07-7060 328 56-20

MODEL 9332



Standard DC Current Shunt or Standard Resistor Applications

- Low Temperature Coefficients
- Controlled Current Distribution
- For use in Air
- Fan Assembly Option for Forced Air
- Low Power Coefficients

The model 9332 series of four terminal DC Current Shunts for the measurement of precision DC Current levels to 3000A are the latest development from Measurements International. Only after many years of research in low value resistance materials, the model 9332 series of standard DC current shunts insures the best performance available today. Combined with MI's experience in automated measurements at high current levels, accuracies less than 0.01% can be achieved at full power.

The shunts are constructed from specially selected elements which are soldered into copper ends using a special low thermal solder. The element then goes through a process of annealing which insures the best performance without introducing self-heating errors with improved temperature coefficients. The shunt, designed to operate in air at full power, is then covered with a decorative perforated cover allowing air to escape during self heating and to protect the elements from physical damage. The copper ends are specially designed to force the current to be evenly distributed through the elements so that the surface area can dissipate the specified power in air. Special considerations have been given to the process

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of curing the element and reducing temperature coefficients. Optimum surface area dissipates the maximum specified power. The annealing process gives the shunt excellent long term stability so that these Shunts can be used in air at full current. For increased performance as a standard resistor they can be placed in the MI model 9300A Air Bath.

Current connections are made at each end of the shunt while low thermal potential connectors are used for measuring the output voltage. Only the current connector will vary depending on the size of the shunt. Special values are also available.

The 9332-Forced Air assembly is also available for all shunts. The number of fans will vary depending



on the length of the shunt. The force Air Assembly attaches

to the Shunt Guard and air is blown down and away from the shunt. Use of the 9332-Forced Air assembly keeps the power coefficient of the shunt low for all currents.

Specifications:

Model	Current Rating (Amp) Note 1	Value (Ω) Note 2	Accuracy @		Power Rating Watts	Time Constant Minutes Note 4	Stability 1 Year (ppm) Note 5	Temp Coef (ppm/°C) Note 6	Power Coef Watt	
			1 Watt (%) Note 3	Full Power (%)					Air ppm	Oil ppm
9332/10	10	0.1	< 0.01	±0.04	10	< 4	10	< 3	< 4	< 1
9332/20	20	0.1	< 0.01	±0.04	40	< 4	10	< 3	< 4	< 1
9332/30	30	0.0333	< 0.01	±0.04	30	< 4	10	< 3	< 4	< 1
9332/50	50	0.02	< 0.01	±0.04	50	< 4	10	< 3	< 4	< 1
9332/100	100	0.01	< 0.01	±0.04	100	< 4	10	< 3	< 4	< 1
9332/250	250	0.0005	< 0.01	±0.05	31	< 10	10	< 10	< 2	< 1
9332/300	300	0.001	< 0.01	±0.04	100	< 4	10	< 3	< 4	< 1
9332/300/50μ	300	0.00005	< 0.01	±0.04	4.5	< 4	25	< 25	< 4	
9332/300/100μ	300	0.0001	< 0.01	±0.04	9	< 4	25	< 25	< 4	
9332/500	500	0.0001	< 0.01	±0.04	25	< 10	25	< 10	< 10 < 2 in 9300A	< 1
9332/500 FAN	1000			±0.01	100	< 5			3	
9332/750	750	0.0005	< 0.01	±0.04	28	< 10	25	< 10	< 10	< 1
9332/750 FAN	1500			±0.01	1125	< 5			10	
9332/1500	1500	0.0001	< 0.01	±0.05	225	< 30	100	< 10	< 2	< 1
9332/3000	3000	0.0001	< 0.01	±0.05	90	< 30	100	< 10	< 2	< 1

- Note 1: Maximum current for ambient air usage and with 9332FAN option
 Note 2: Nominal resistance from 1 μΩ to 100 mΩ in decade values, custom values are also available as special order.
 Note 3: When used as a standard resistor. Report of calibration is included with values and uncertainties for 10% and 75% of current included.
 Note 4: Time constant is the time for the resistance value to settle within 10 ppm of its final value.
 Note 5: Stability specifications based on using the shunt as a standard resistor.
 Note 6: Temperature and Power Coefficient to be added to base uncertainty for temperatures other than 23°C.

How to Order:
 Model: 9332/XXX
 DC Current Shunt

Distributed By:

Corporate Headquarters

Measurements International
 PO Box 2359, 118 Commerce Drive
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