



Product Area of Interest

Add to Favorites

RESISTANCE STANDARDS R-11 SERIES

(Formerly mfd. by PPM, Inc.)



DESCRIPTION

The Model R-11 series of resistance standards are a line of precision resistor boxes suitable for use as high-value secondary laboratory standards of resistance. They are available in two models: the Model R-11-1M at one megohm per step, and the Model R-11-10M at 10 megohms per step. All units have 11 resistors in series, with the capability of connecting groups of resistors in series, parallel, or series-parallel. Units have three terminal measurement capability. These resistance standards may also be used as precision voltage dividers, because of their high accuracy and their excellent temperature and long-term stability.

PHYSICAL

The Model R-11 series of resistance standards are 14.2 inches long, 6.2 inches wide, and 4.6 inches high (including knobs and binding posts). They are housed in sealed enclosures. Weight is about 13 pounds.

RESISTORS

Resistors are hermetically-sealed precision types to avoid any changes in value with humidity, and are matched for temperature drift. Internal trimming adjustments enable calibration for each resistor to within +/-1 ppm of the nominal value.

SWITCHES

A special low-leakage three-position rotary switch is provided at each resistor junction and at the two ends of the resistor string, to connect that point to either binding post bus, with a center-off position providing for no connection. By connecting ten resistors in parallel, a resistor with effective value of 1/10 of the nominal may be made. Similarly, by connecting ten resistors in series, a resistor with ten times the nominal value per step can be made. Nine resistors may be connected in series-parallel to yield the nominal step value, while averaging the errors of the nine resistors.

TERMINALS

Two low-thermal 5-way binding posts provide for connection to the two switch buses. A shielded coaxial connector provides for connection at one end of the resistor string. A third, metal binding post provides for connection to the metal case.

SPECIFICATIONS

<p>ACCURACY (at 23 Degrees C.)</p> <p>Initial: +/-25 ppm of nominal (R-11-1M), +/-30 ppm (R-11-10M), matched to 10 ppm.</p> <p>Transfer: +/-1 ppm.</p> <p>Calibration: +/-10 ppm.</p>	<p>INSULATION</p> <p>Leakage: 10,000,000 Megohms, terminals to case.</p> <p>Breakdown: 3.5 KV peak, terminals to case and between terminals.</p> <p>1.0 KV maximum across each resistor.</p>
<p>STABILITY</p> <p>Temperature: +/-5 ppm/degree C., matched to +/-5 ppm/degree C.</p> <p>Long-Term: +/-50 ppm for three years.</p>	<p>ENVIRONMENT</p> <p>Operating: 0 to 55°C., 0 to 95% relative humidity.</p> <p>Storage: -40 to +55°C., 0 to 100% rel. humidity.</p>
<p>POWER RATING</p> <p>Max. Power: 1 watt/resistor; 10 watts/box.</p> <p>Power Coeff.: +/-0.05 ppm/mW.</p>	<p>CALIBRATION</p> <p>30 months for >85% probability in tolerance.</p> <p>* Specifications subject to change without notice.</p>