



AC/DC Standard Resistors Models SRA & SRB

Eventually all resistance thermometry refers back to one or more fixed resistors. These are a key element in any laboratory which measures temperature. The resistors need to be very stable with time, temperature and transportation, and they need to have negligible inductance and capacitance.

They also need to have a long and successful history of use. Wilkins and Swan at our National Physical Laboratory (NPL) developed a resistor design flexible enough to allow windings with various resistance values to be made available and stable enough to be accepted world-wide as resistance standards. Particularly important is that the AC/DC characteristics are the same up to about 1000 Hz.

This design has been licensed to H. Tinsley & Co. who have been producing (and have made further improvements to) this product since 1970.

Isotech are pleased to be able to offer this design of resistor made for us by Tinsley with 1 of 2 calibration possibilities:

UKAS with an uncertainty of ± 0.3 ppm (SRA models).

NPL with an uncertainty of ± 0.1 ppm (dependant on resistance value).



TYPE SRA Values 1, 10, 25 and 100 Ohms

400 Ohms to special order

TYPE SRB Values 1000, 10,000 Ohms

Calibrated uncertainty 0.3ppm (see UKAS schedule)

Accuracy of adjustment ±20ppm

Stability 2ppm/year

(0.5ppm/year to special order)

Temperature coefficient 2ppm/°C

of resistance 0.5ppm to special order

Recommended 10 mW

dissipation

Maximum dissipation 1 Watt

Approximate load 6ppm/Watt

coefficient

A.C./D.C. transfer 1ppm $10\Omega - 10k\Omega$

ror at 1kHz 5ppm 1Ω

Construction

Element Strain free, immersed in dry

oil (No. 4 Kerosene)

Top panel Bakelite with PTFE inserts

and engraved lettering

Terminal - Current 0BA copper

Terminal - Potential 4BA copper

Earth 6BA brass

Dimensions Container 114 x 76mm dia.

Overall 140 x 83mm dia.

Weight 680g

How to order

Standard Resistor

Please specify type, resistance value and calibration

option.