## जIECH



## 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 $\pm 0.3 \mathrm{ppm}$ (SRA models).
NPL with an uncertainty of $\pm 0.1$ 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 | $\pm 20 \mathrm{ppm}$ |
| Stability | 2ppm/year <br> (0.5ppm/year to special order) |
| Temperature coefficient of resistance | $2 p p m /{ }^{\circ} \mathrm{C}$ <br> 0.5 ppm to special order |
| Recommended dissipation | 10 mW |
| Maximum dissipation | 1 Watt |
| Approximate load coefficient | 6ppm/Watt |
| A.C./D.C. transfer error at 1 kHz | $1 \mathrm{ppm} 10 \Omega-10 \mathrm{k} \Omega$ $5 \mathrm{ppm} 1 \Omega$ |

Construction

| Element | Strain free, immersed in dry <br> oil (No. 4 Kerosene) |
| :--- | :--- |
| Top panel | Bakelite with PTFE inserts <br> and engraved lettering |
| Terminal - Current | OBA copper |$|$| Terminal - Potential | 4BA copper |
| :--- | :--- |
| Earth | 6BA brass |
| Dimensions | Container $114 \times 76 \mathrm{~mm}$ dia. |
| Weight | Overall $140 \times 83 \mathrm{~mm}$ dia. |

## How to order

Standard Resistor
Please specify type, resistance value and calibration option.

