



Technical details

Construction

The ring-shaped bodies are made from steatite. The wires and bands with a low temperature coefficient, which are used for the resistance winding, are made from CuNi 44 according to DIN 17 471, 46 460 and 46 461 (formerly WM 50) for low and medium ohmic values or from CrNi 6015 according to DIN 17 742 and 46 463 (formerly WM 110) for high ohmic values. They are wound on distance and fixed and protected by a layer or a special cement which also improves the heat dissipation. The wire windings with rated continuous dissipation of resistors from 16 W to 500 W are produced according to DIN 41 473, 41 475 and 41 476.

All resistors are manufactured with 3 connections and isolated shaft and can be used as voltage divider and as series resistance. The standard types of sizes R 10, R 20, R 40 und R 80 are equipped with fast-on terminals 4,8 x 0,8; all the others with screw connections. The contacts are usually made of silver. A coppered carbon contact can be used for high ohmic values and frequent operations.

Continuous power rating

The listed typical power values are valid during permanent operation and at a maximum ambient temperature of 40° C. They are valid under the condition that cooling air may enter incessantly and that the potentiometers are fixed onto metallic surfaces. If the resistors are fixed onto non-metallic surfaces, the power rates should be lowered to about 70% of the listed values. If the ambient temperature is essentially higher than 40° C, the typical power has to be reduced by 5% for any temperature rise of 10 K.

In addition to the mentioned maximum and minimum ohmic values other values can be achieved if required.

The test voltage between shaft and the connections (50 Hz AC voltage) with R 10 and R 20 is 2000 V, with all other sizes 2500 V.

How to order

When ordering resistors, following details should possibly be mentioned: size of resistor, ohmic value (serie E 12 preferably), tolerance of resistance, desired accessories like knob, switches or scale disc, special types, application, power length of shaft.

If there are no given details for a resistor, we feel free to furnish according to our own ideas.