

Kelvin Measurements – General Information

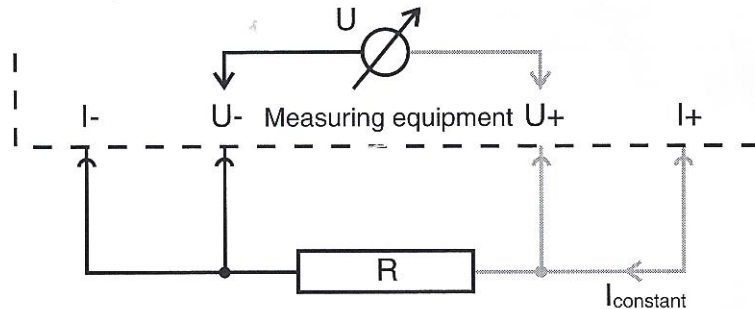
The Kelvin leads have been specially developed for four-wire measurement. The handling of the Kelvin clips is just as simple as in two-wire measurement.

Important Notes

- ☞ **When connecting the Kelvin leads to the test instrument, please follow the instructions of the instrument manufacturer.**
- ☞ **In order to obtain better heat dissipation, we recommend using the shield of the coaxial cable to carry the current (black arm, black plug) and the internal conductor (red arm, red plug) for the voltage connection.**
- ☞ **In all Kelvin measurements with one pair of XDK-KELVIN, the arms of a given colour (red or black) should point in the same direction in order to ensure maximum precision of measurement.**

Principle of Four-Wire Measurement

A defined current I_{constant} flows through the resistance R , coming from a constant current source. The voltage U over the resistance R can be very accurately measured, as due to the high inner resistance of the voltmeter, the voltage drop on the circuits can be disregarded (see sketch). According to Ohm's law $R = U / I_{\text{constant}}$.



Technical Data XDK-KELVIN

Rated voltage

- with respect to outside:

1000 V, CAT II

- between opened arms:

Max. 600 V

Rated current:

2 x 20 A

(inner conductor and shield)

Connection to equipment:

2 x \varnothing 4 mm safety plugs

Lead length:

250 cm

