



NEUTRAL GROUNDING RESISTORS



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Short circuits between phase and ground can result in irreversible damage to networks and equipment; it is therefore of the utmost importance to be able to control and reduce their effects:

Grounding Resistors limit the fault current that arises due to phase-neutral short circuits.

Engineering Departments and Power System Designers specialised in medium & high voltage equipment consider that the grounding through resistor show many undeniable advantage with respect to alternative methods (such as insulated grounding, direct grounding or grounding through a reactance).

The main advantages are: easier detection of fault location, limitation of fault current, no transient over voltages.

Relevant parameters in the design of a Neutral Grounding Resistor may vary greatly: **KLK Electro Materiales, S.L.U.** has developed a line of standard products (for the most common requirements) along with tailored products, each developed and customised according to the required project characteristics.

Our products range from Low Voltage systems (<1kV) to High Voltage (132kV insulation class), and from very low fault current values (tens of Amps) to very high (>1kA).

The essential parameters needed to design a Grounding Resistor are:

- Nominal Voltage
- Fault Current
- Fault Duration (10s is customary)



Other relevant parameters are:

- Protection degree of enclosure: from IP00 - i.e. no enclosure - to IP55, standard solution IP23.
- Enclosure finish: our standard is galvanised steel welded framework, but different stainless steel grades (such as AISI430, AISI304 or AISI316) are available. Painting in the desired RAL colour is also an option.
- Continuous current rating: it may affect significantly the performance of the resistor, especially when high IP degrees are required.
- Environment and Elevation: we design resistors for the harshest industrial or natural settings.
- Auxiliary components: during our many years of operation we have selected a number of trusted suppliers for a wide choice of components, such as Current Transformers, Switches, Disconnectors, etc.

