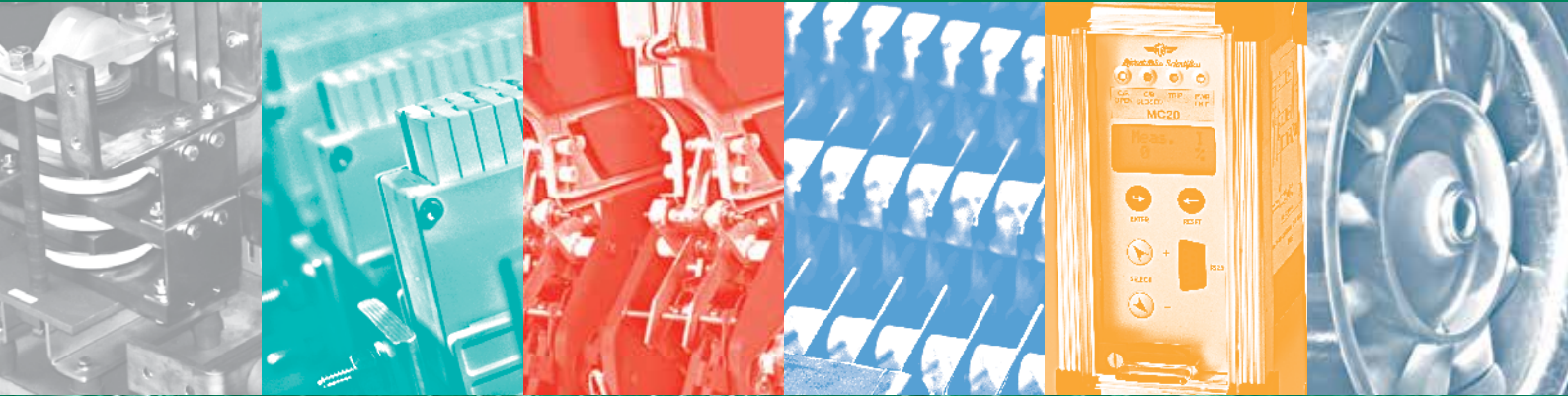


Infrastructure

Components for Infrastructure



Rectifiers
DC High Speed Circuit Breakers
Contactors
Resistors
Protection Relays
Transducers
Fans



Microelettrica Scientifica



Energy

Microelettrica Scientifica's extensive product ranges have become the standard of reference for a growing number of customers worldwide in the challenging Energy Market. Microelettrica Scientifica's been evolving through innovation to support new technology in generation, renewable energy and smart grid.

Applications

Photovoltaic interface relay

Feeder and bus relay

Generator relay

Resistor for harmonic filters

Neutral grounding resistors

Load banks

DC contactors for inverters and UPSs

Photovoltaic string contactors

Ground fault neutralizer system

Products

Contactors
Disconnectors

DC High Speed Circuit Breakers

Power Resistor

Protection Relays

Transducers

Fans

Rectifiers

Industry

During almost 30 years of operation, a close relationship with the Customers has been created. Microelettrica products are present in most of the industries such as Steel making, Cement, Glass, Chemical, Oil&Gas and Utilities.

Applications

Motor and generator protection

Feeder and bus bar relay

Generator relay

Resistor for harmonic filters

Neutral grounding resistors

Load banks

DC contactors for inverters and UPSs

Photovoltaic string contactors

Ground fault neutralizer system



Railways

Today, Microelettrica Scientifica is a leading supplier of equipment for dc traction substations. We offer to our Customers a complete portfolio of DC Traction System components.

Products

DC Switchgears and Switching Cubicles

DC High Speed Circuit Breakers

Feeder manager and DC Relays for Traction

DC Transducers

Contactors and Disconnectors

Power Resistor for Line Testing

Braking Resistors for Fixed Installation

Fans

Rectifiers

Applications

DC Power Substations

Traction lines

DC Switchgears

Depot

Underground ventilation

Made in Microelettrica Scientifica

Always aiming for the best results, Microelettrica Scientifica develops and manufactures the entire range of products in Buccinasco close to Milan. We also run operations in U.S.A., South Africa, China, India, France, Brasil and Turkey through which our Customers have access to immediate local assistance and the possibility of localization of Microelettrica Scientifica products. Our Customers know they can always count on quality, excellence and accuracy of Microelettrica Scientifica Products and Services.

Products

Contactors
Disconnectors

DC High Speed Circuit Breakers

Braking Resistors
Resistors for Traction Control

High Voltage Transducers

Fans

Starting Braking Discharge



Starting and Braking Resistors are widely employed for controlling motors during start and/or stop.

Starting Resistors may be used for wound rotor induction motor and DC wound motor (this last type of motor is less and less common): adding a series resistor to each rotoric phase reduces the current and improves the starting torque. Starting Resistors may also be employed for squirrel cage induction motors, where series resistors added to the stator, limit initial current to three times its nominal value. Starting Resistors for squirrel cage motors are also known as Ballast Resistors.

The essential parameters needed to design a Starting Resistor are:

- Horsepower
- Rotor/Stator Voltage
- Rotor/Stator Current
- RPM
- Application: different applications require different solutions

Crane control is a quite common application for **Braking Resistors**: during descent the load, especially if heavy, may cause the motor to generate power. Resistors are thus used to avoid unwanted and uncontrolled acceleration.



Resistors



Braking Resistors for large motors are customised to best comply with any requirement: we have developed special Braking Resistors for important research institutes (among them Max Planck Institute) and for energies in excess of 3400MJ.

Applications

Industry

De-excitation of large capacitors and inductors must be carried out with care to avoid impulsive currents that could damage them permanently. **Discharge Resistors** limit the peak current and protect the capacitive/inductive device.

The essential parameters needed to design a Discharge Resistor are:

- Nominal Voltage
- Discharge Current
- Discharge Duration

Discharge Resistors are often used by research institutes and they require a very high level of customisation, sometimes also leading to the development of new technologies for resistive elements. Microelettrica has cooperated with Universities all over the world and with the most prestigious research centers (among them, CERN in Geneva).



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