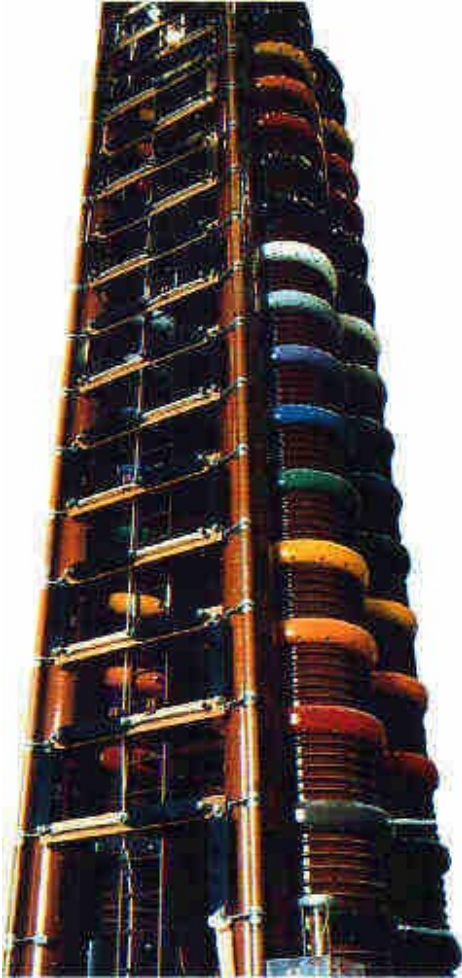


# HIGH VOLTAGE IMPULSE RESISTORS



## FEATURES:

- High Withstand voltage for lightning and switching impulse voltages up to 400kV
- low inductance (Inductive time constant  $L/R=5-250$  nsec, depending on ohmic value; in most cases below 75nsec)-High thermal load capacity up to 60kJ
- low resistance variations through wide range of operating temperature long term resistance stability
- small resistance tolerances - standard 4%; on request 3%, 2% or 1%
- terminals according to customer requirements (mild steel, brass, copper - chromium, cadmium or silver electroplated )
- ohmic values: 12 ohms - 150 kilo ohms
- custom made with deliveries within weeks.

## APPLICATIONS:

- resistors for use with impulse generators (of any design) for the generation of lightning and switching waveforms: front (series) resistors, tail (parallel) resistors, charging resistors, earthing resistors
- measuring resistors for resistive impulse voltage dividers
- resistors for damped capacitive voltage dividers
- resistors for recurrent surge generators

## DESIGN:

- resistors are anti-inductively wire wound on insulation core of high thermal resistance.
- resistance wire is enamel insulated, of nickel-Chromium 80.20% composition, with temperature coefficient of 100ppm/degree C.
- Winding is initially vacuum sealed in resin. For lower impulse loads it is protected with fibreglass tape and heat shrink sleeve. In most cases it is cast in resin of high thermal conductivity and high operating temperature.
- Shape, overall dimensions and terminals of resistors are according to customer specifications.

## ORDERING INFORMATION:

In order to design and quote your resistor, the following information is required:

- application of resistor (waveshaping, charging, measuring etc.)
- resistance value and desired tolerance
- operating voltage
- energy (impulse load) in kJ, impulse repetition rate and duty cycle
- operating medium (air, gas, oil)
- overall dimensions and limitations and details of terminals (Diagrams are required)

Upon receipt of the above information, a preliminary design of the resistor is prepared, which will be submitted for comments and final approval.

**The following companies have purchased our resistors and continue to rely on Interworld for High Quality non inductive resistors:**

B.C. Hydro - Powertech Laboratories - Canada  
Ontario Hydro - Canada  
Hydro Quebec - IREQ - Canada  
Haefely Trench - Canada  
Asea Brown Boveri, U.S.A.  
Westinghouse - U.S.A.  
Canadian Standards Association - Canada  
Messwandlerbau - Germany  
General Electric - U.S.A.  
Bonneville Power - U.S.A.  
Olex Cables - Australia  
Tyree Westinghouse - Australia  
and many more.

**Other products produced by Interworld include:**

Current Shunts, Voltage Dividers as well as the capability to Retrofit existing or outdated Dividers.



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