



Romarsh Elcomponics

Transformers : 50VA - 1MVA



Transformers 50VA 1MVA

- single & three phase
- power & distribution
- harmonic suppression (K-factor)
- isolation
- frequency matching
- motor starting
- special loads
- inverter / converter
- medium to high frequency

Inductors : 1VAr - 1MVAr



Inductors 1VAr 1MVAr

single & three phase

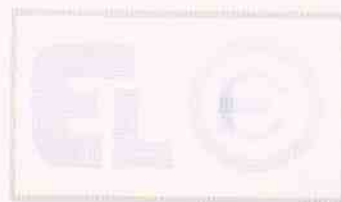
- DC line chokes
- AC harmonic & ripple filtering
- inverter / converter line chokes
- common mode chokes
- power factor correction
- source or load matchingz
- balancing reactors

Power supplies : Defence & Industrial



Power Supplies

- single & three phase
- stand-by power
- battery charging
- high frequency
- charging
- automotive platform & tail lift power



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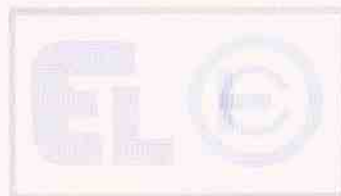
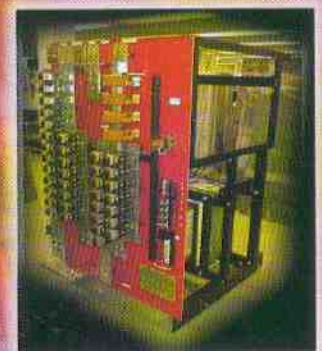
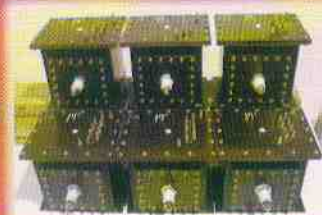
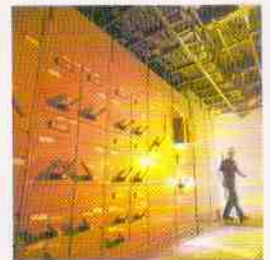
bespoke magnetic devices

Special Applications

Romarsh is able to provide solutions to meet the electrical and mechanical specifications of its customers and to consolidate the proven design for cost effective volume production. Transformers in both single-phase and three-phase configuration, chokes, inductors and AC/DC power systems are manufactured to the requirement of each application with the emphasis on quality and reliability. We have a well established expertise in high current and high voltage applications along with a wealth of knowledge in producing medium frequency solutions.

Applications of Romarsh products include :-

- Low voltage distribution.
- AC/DC power supplies & UPS.
- Inverter / converter systems.
- Telecommunications.
- Process control.
- Machine drives / Motor control.
- Turbo / micro turbine generators.
- UV technology.
- Ozone & corona generation
- Construction.
- Electro-Medical equipment
- Refrigeration/air conditioning.
- Lighting.
- Environmental test equipment.
- Wind turbine generation.
- Mining.
- Broadcast transmission equipment.





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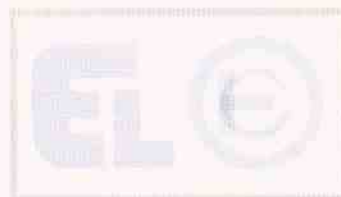
bespoke magnetic devices

Traction

Romarsh has over 30 years experience in the design and manufacture of wound components for use in rolling stock and trackside applications. From its initial supply of MA set chokes for the UK market in the early 1970's Romarsh now has products in use throughout the world.

Products and applications include :

- *Components used in frequency converters up to 500KW.*
- *DC booster chokes.*
- *Air cored and iron cored inductors both naturally air-cooled and forced air-cooled.*
- *Three-phase line reactors for harmonic filtering utilising high-grade low loss electrical steels with zero magnetostriction for minimum noise emission.*
- *Single-phase and three-phase converter output isolation transformers with normal or high leakage reactance.*
- *Transformer and filter inductors in medium frequency charging systems.*
- *Motor chokes and inductive diverts.*
- *Transformers and DC power supplies for trackside signalling.*
- *K-Factor transformers for use with UPS signal protection.*





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Power Factor Correction

The 3FC range offers standard reactors to meet the requirements of the power factor correction market. The standard 3FC frame sizes have been carefully designed to filter common harmonics and to provide power factor correction up to 150KVAR. Non standard frame sizes are available up to 2.5MVAR and 11kV. New investment in winding and busbar connection techniques enable Romarsh to offer competitive prices and short lead-times.



The specification for these PFC inductors includes:

- low-loss silicon steel.
- Choice of copper and aluminium foil winding.
- bonded gaps for low noise.
- standard tolerance +/- 3%.
- Di-electric voltage withstand to 3kVrms as standard & up to 11kV when required.
- saturation less than 10% at twice the full-load current.

built to IEC289.

K-Factor (non-linear loads)

To overcome the effects of non-linear loads in today's power system requirements, it is necessary to either de-rate the transformer or use a K-Factor transformer specifically designed to minimise the effects of harmonic currents.

Conventional transformers operating at K20 non-linear conditions will need to be de-rated by up to 40%, it is economical to use a K-Factor transformer.

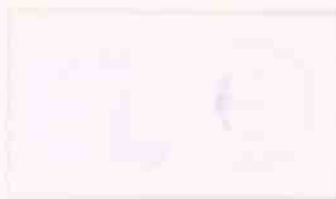
Romarsh have designed single-phase 2KTX and three-phase 3KTX ranges to:-

- Reduce thermal losses due to harmonic distortion using high grade low loss electrical steels.
- Reduce skin effect and proximity losses by improved coil design and appropriate selection of conductors.
- Withstand higher dielectric stresses caused by non-sinusoidal waveforms by using a dedicated insulation system with a thermal classifications up to 200°C.

The K-Factor is based on currents up to the 25th harmonic with the most prevalent being the 5th, 7th, 11th and 13th.

The 3KTX rating is fitted with 200% rated neutral terminals to accommodate the odd harmonics (3rd, 9th, 15th etc.) on 3 phase, four wire systems serving non-linear loads with line-neutral connections if required.

For further information on our 3FC, 3KTX or 2KTX ranges please visit our website



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