

Cast Resin Transformers

Bowers Electricals Ltd. supply New Cast Resin Transformers, both to suit typical distribution specifications and special designs to suit customers' requirements either in IP00 specification, (often required by LV Switchboard manufacturers) or with sheet steel ventilated enclosures and cable boxes, which can be designed and built to suit bespoke specifications. We can also offer units built integrally within our new manufactured low voltage switchgear.

Cast Resin transformers are constructed with their HV windings encapsulated in resin and are an excellent alternative to traditional oil immersed transformers. Self-extinguishing and high mechanical resistance to electro-dynamic stresses are some of the qualities of Cast Resin transformers. All our Cast Resin transformers are manufactured to BEEN60076 IEC14-4/14-8 and CENELEC HD 464-538. Our standard range of Cast Resin transformers is 50kVA up to 3150kV. However, we are able to design and manufacture special units to suit most applications.

Transformer windings

HV windings are constructed from electrolytic aluminium or copper strip, having rounded edges and inter-turn polyester film insulation. Each coil is then wrapped in a fibreglass mat to provide mechanical resistance. After the drying process the coils are vacuum filled with Class 'F' epoxy resin, which includes quartz or tri-hydrate. LV windings are generally made from electrolytic aluminium or copper foil having Class 'F' inter-turn pre-impregnated film insulated and then oven dried. As a routine test, all HV Cast Resin transformer coils are partial discharge tested at 110% normal volts to give less than 20pC.



Fittings

Typical fittings include, HV off-circuit tapping links for $\pm 2 \times 2.5\%$, rating plate, PT100 temperature devices, earthing terminal, under-base with removable bi-directional rollers,

Our typical technical specification for our Cast Resin transformers is:

The transformers will be of the 3 phase 50Hz naturally cooled, double wound core type having a core manufactured from cold rolled steel. The transformers will be of the design and construction as described above. They will be manufactured in accordance with BSEN60076 and designed for a temperature rise of 100°C as measured by increase in resistance method following a continuous load run. Forced blown versions are also available for increased output.