HIGH EFFICIENCY TRANSFORMER

Transformers have various types of losses and efficiency is seldom specified when buying dry-type transformers. Values of 95% or higher are typical, and differences between high- and low-efficiency units are only 1% to 2%, with a significant first-cost premium for the more efficient units. Recent design changes seek to address these losses and increase efficiencies. Higher efficiency equipment reduces energy usage translating into cost savings and less burden on the power distribution system from a utility perspective.

The transformer's performance has major impacts on electricity use given the non-stop operation of the equipment over its 25-year service life. Better performance translates to reduced load on the electricity system, lower electricity bills, and greater reliability. Payback periods vary with the equipment and electricity costs and can be as short as one year or as long as six years or more.

A transformer can be made more energy-efficient by improving the materials of construction (e.g. better-quality core steel or winding material) and by modifying the geometric configuration of the core and winding assemblies. Making a transformer more energy efficient (i.e. reducing electrical losses) is often a trade-off between more expensive, lower-loss materials and designs, and the value a customer attaches to those losses. For a given efficiency level, the no-load and load losses are generally inversely related: reducing one usually increases the other.

TECHNICAL SPECIFICATIONS

CAPACITY

- 100kVA and above

RATED VOLTAGE

- Up to 1000V

RATED FREQUENCY

- 50Hertz
- 60Hertz

AMBIENT TEMPERATURE

- 40°C
- Others upon request

EFFICIENCY

- > 98%

INSULATION CLASSIFICATION

- Class F & H
- Others upon request

REFERRENCE STANDARD

- IEC 60076
- IEC 61558

TRANSFORMER CORE MATERIAL

- High grade electrical steel

WINDING CONDUCTORS

- Copper or Aluminium wire
- Copper or Aluminium foils

OPTIONAL ACCESSORIES

- Enclosures up to IP54
- MCCB with or without shunt trip
- Ammeter and Voltmeter
- Temperature controller
- Fan fail detector alarm
- BMS open relay contacts