

# K-FACTOR TRANSFORMER



Today's modern electronic, electric components and circuitry utilize switching mode power supplies for their operation which are non-linear loads in nature and unlike a linear load which uses current from the power source continuously over the sinusoidal cycle where else a non-linear load draws current in pulses from the

power source thereby creating harmonic distortion. These harmonics currents cause significant power system problems such as; circuit breakers and fuses blowing far below current ratings, Neutrals in transformers and panel boards are much hotter than their ratings, transformer overheating even when operating well within their specified nameplate rating

A K-factor rated transformer is designed not to mitigate harmonics but to handle a degree of harmonic load currents without overheating. The K-rating number of the transformer are values used to determine how much harmonic current a transformer can handle without exceeding its maximum temperature rise level. K-factor values range from K1, K4, K9, K13, K20 up to K50. For a K-factor of K1 transformer is used for linear loads only. The calculation of K-factor for a given load is outlined in IEEE C57.110.

## TECHNICAL SPECIFICATIONS

### CAPACITY

- Up to 2500kVA

### RATED VOLTAGE

- Up to 1000V

### RATED FREQUENCY

- 50Hertz
- 60Hertz

### AMBIENT TEMPERATURE

- 40°C
- Others upon request

### INSULATION CLASSIFICATION

- Class F & H
- Others upon request

### REFERENCE 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 alarm
- BMS open relay contacts