

UPS ISOLATION TRANSFORMER (12 PULSE)



In most power electronics applications, diode rectifiers are commonly used in the front end of power converter as an interface with the electrical

The non-linear or distorted input current flowing through the system produces distorted voltages at the point of common coupling (PCC). Due

to nonlinear nature of the diode bridge rectifier input line current have significant harmonics. For AC motor drive systems with no dc-link smoothing inductor, the discontinuous conduction of the diode bridge rectifier result in a high THD in utility line current.

UPS isolation transformers are phase shift transformers specially designed to mitigate the effect of speed drives when connected to the network, by helping to reduce the harmonics reaching the electrical network, depending on the number of pulses of the VSD. This harmonic distortion may be mitigated by increasing the number of rectifying sections used in the VSD meaning the larger the number of pulses, the smaller the trigger distance between waves, resulting in a shorter distance between wave crests and thus in lower harmonic distortion.

A three-phase transformer with Delta primary winding and 2 different isolated windings configuration consisting of a wye and a delta configurations secondary windings is used to power two 6-pulse converter bridges connected in series with 30° phase shift to give 12-pulse operation.

TECHNICAL SPECIFICATIONS

CAPACITY

- Up to 2500kVA

RATED VOLTAGE

- Up to 1000V

RATED FREQUENCY

- 50Hertz or 60Hertz

AMBIENT TEMPERATURE

- 40°C

INSULATION CLASSIFICATION

- Class F & H
- Others upon request

TRANSFORMER CORE MATERIAL

- High grade electrical steel

WINDING CONDUCTORS

- Copper wire
- Aluminium wire

OPTIONAL ACCESSORIES

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