

# DELTA-ZIGZAG ZERO PHASESHIFT TRANSFORMER



3 phase Delta/Star transformer is one of the most popular configurations used in the electrical industries. It is known that the primary delta has the characteristic of trapping 3<sup>rd</sup> harmonics and the secondary star is to provide a neutral point for single phase application or for grounding purpose. Although,

other vector configurations can be found in some applications, however, the most common vector is the Dyn11.

There is no technical difference between these vector groups in terms of performance, the only factor affecting the choice between one or the other is system phasing such as whether parts of the network fed from the transformer need to operate in parallel with another source or if it is a replacement unit. It also matters if you have an auxiliary transformer connected to generator terminals. Vector matching at the auxiliary bus bar.

In general, Delta-Star transformers of any vector groups will always have a phase displacement of either positive or negative 30° or multiple of 30°, the only way to achieve the secondary to be in phase is through zigzag winding or Dzn0 vector. One of the applications of such transformer is use as a bypass transformer in a UPS system.

## 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