Zig Zag Grounding Transformer

Product Newsletter - December 19, 2017

Today's modern power systems require a solid ground reference to service single phase loads, protect personnel from undetected ground faults, and to assure that adequate ground fault current exists for proper ground fault relay operation.

Many utilities are now requiring renewable power providers to install grounding transformers at their tie point to grounded, ungrounded or undergrounded systems to assure an adequate ground reference.

At Elgin Power solutions we manufacture a wide variety of grounding transformers to service these needs. From large pad mounted 35 KV oil filled grounding transformers to smaller 480 Volt dry type, metal enclosed units we have your solution.

One of our more popular products is the "Zig-Zag" grounding transformer. This is a three phase transformer with a special winding that results in a reduced voltage across each set of coils. Consequently a "Zig-Zag" can be made smaller by a factor of the square root of three compared to a normal transformer. And as a result Zig Zag grounding transformers are more cost competitive than a normal delta/wye grounding transformer.

Zig Zags use three sets of 1:1 ratio transformer coils. The secondary set of winding of each pair is reverse wound. "A" secondary feeds "B" primary, "B" secondary feeds "C" primary and "C" secondary feeds "A" primary. The return side of all three primary coils is then tied to ground. As a result only zero sequence currents flow. Positive and negative sequence currents are blocked.

Zig Zag grounding transformers are used when there is only one voltage involved. A two winding delta/wye grounding transformer must be used if the secondary voltage winding is to be a lower voltage, or if the secondary is desired to be used for control or relaying.

Elgin's state-of-the-art manufacturing facility is equipped with:

- 5 modern coil winding machines operated by experienced winders
- Modern Insulation cutting machines & Core steel cutting machines
- Our varnish dip tanks use sustained vacuum for maximum penetration.
- Complete assemblies are baked to power factor in ovens to provide water resistance, proper insulation levels, and mechanical stability.
- Extensive testing is done prior to release to assure the quality and reliable performance of the final product.

We can supply indoor or outdoor Nema 3R compliant units built to ANSI C57.12.28 standards. Contact us with your specifications and let us make you a solution.

Visit Us At
www.ElginPowerSolutions.com
or contact your
EPS Sales Representative

"Providing Quality Solutions to Your Electrical Needs"

ELGIN POWER SOLUTIONS

ORDER FORM

Please enter the information in each box to the best of your ability.

KVA RATING –

Based on 3Io rating, (not required if the continuous current is known)

CONTINUOUS CURRENT RATING –

Always be careful to define as phase "I0" or ground current "3Io". Please specify if single phase loading exists, and what KVA or current rating.

SHORT TIME CURRENT RATING –

(TYPICALLY 3% OF THE CONTINUOUS RATING FOR 10 SECONDS) PER ANSI / IEEE STANDARD 32. We can overbuild to a higher short time rating if desired.

VOLTAGE RATING –

Specify Line to Line, and Line to Ground.

BIL RATING –

Typically based on system BIL rating.

X/R RATING –

Ratio of Inductive reactance to wire resistance.

PERCENT IMPEDANCE –

Define KVA Base

CONSTRUCTION TYPE –

Dry Type or Oil Filled

INSTALLATION LOCATION –

Indoor or Outdoor, (Special environment such as high corrosion environment)

ENCLOSURE TYPE –

Welded or Bolted Construction, Standard 11 gauge P&O steel, Aluminum or Stainless steel

ENCLOSURE COLOR –

Typical colors are Munsell Green, ANSI 70 Outdoor Light Gray, Or ANSI 61 Dark Gray. Other colors available on request. All enclosures Powdercoated per ANSI C57-12.28 for Maximum Corrosion and weather resistance.

CABLE ENTRY LOCATION –

Typical options include Roof Bushings, Bottom Live Front, Bottom Dead Front, or for other please specify.

YOUR NAME

COMPANY

CONTACT INFO

CLICK HERE TO SUBMIT FORM BY EMAIL

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