



Step Up 3 Windings Transformer for Windfarm Applications



Prolec GE has developed a 3 winding transformer for wind turbines with a doubly fed induction generator technology, which requires a third winding to feed the rotor generator.

Product characteristics includes... step up application with an electrostatic shield for a protection against new electronic technology applied in new generation wind turbines.

Product scope / standard features

- 3400 kVA total rating
- High voltage 34.5 kV (to the collector system)
- Medium voltage 6 kV (input from the generator)
- Low voltage 690 V (tertiary winding to feed rotor generator)
- ONAN
- 60 hertz
- 65°C temperature rise
- Altitude up to 3300 FASL
- HV tap charger
- Loop feed dead front HV terminals
- Impedances:
 - LV to MV 3.6 to 6.6 %
 - MV to HV 6.0 to 7.3%
 - LV to HV 9.9 to 14.3 %
- Finish color Green Munsell 7GY 3.29/1.5
- Built to all applicable IEEE standards

Special features

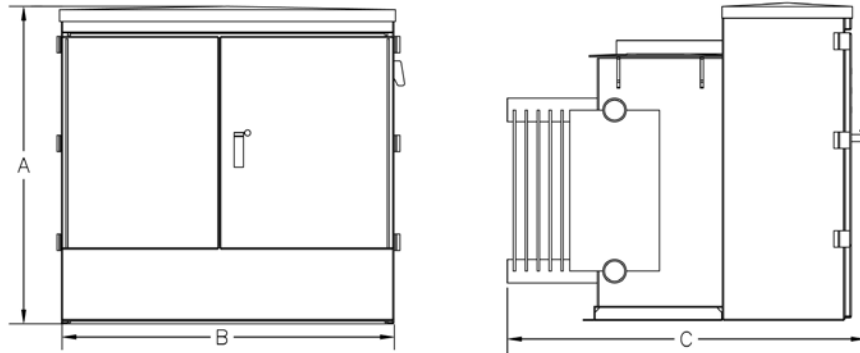
- 55°C temperature rise
- Bayonet fuse holders with flappers
- High fire point fluids
 - silicone
 - hydrocarbon
 - vegetable fluids
- Internal oil switch (radial or loop)
- Under oil internal arresters
- Seismic designs IBC Certified
- Stainless steel tank and cabinet construction
- Optional colors
- Full 200 kV BIL in windings and accessories

Value Added

Concept	Features	Value point
Step Up	Increased margin for transformer over excitation	Prevent core saturation, partial discharges, and gassing
Electronic Protection	* Electrostatic Shield	Provide a pathway to ground for any residual resonance
Network Protection		Prevent capacitive coupling between the grid and capacitive banks of the inverter
Tertiary winding	Third winding to feed the induction rotor generator	Reducing the number of components to be installed up in the nacelle

Standards and certifications available





Overall typical dimensions for reference

kVA	A* Height	B* Width	C* Depth	WEIGHT (lb)	Core Material
3400	90	105	120	22,350	Silicon Steel

* Dimensions in inches

** Dimensions and weight are approximate and subject to change without notice and should not be used for construction purposes

*** Other ratings available upon request

