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 include... step up application with an electrostatic shield for 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**

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

**Standards and certifications available**
Overall typical dimensions for reference

<table>
<thead>
<tr>
<th>kVA</th>
<th>A* Height</th>
<th>B* Width</th>
<th>C* Depth</th>
<th>WEIGHT (lb)</th>
<th>Core Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>3400</td>
<td>90</td>
<td>105</td>
<td>120</td>
<td>22,350</td>
<td>Silicon Steel</td>
</tr>
</tbody>
</table>

* 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