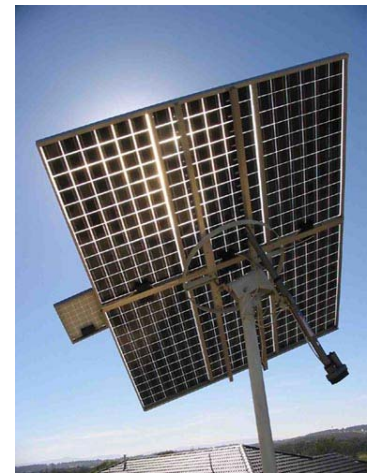
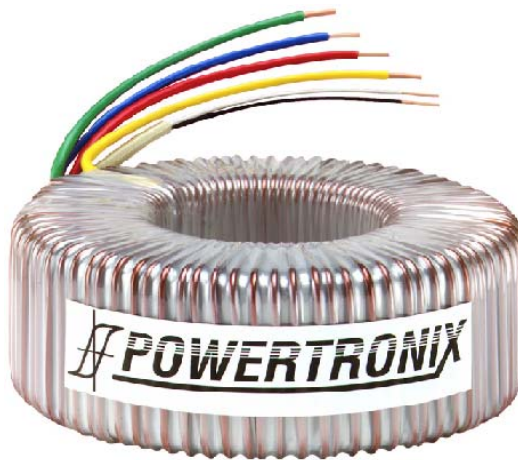


## Powertronix Delivers.....

# LONG TERM, RELIABLE POWER SOLUTIONS FOR THE RENEWABLE INDUSTRIES

### Powertronix Corporation Implements Partial Discharge Test to Ensure High Quality, Reliable Transformers



Powertronix's Rigorous Test Criteria Ensure Efficient, Reliable Power Solutions for Long Term Cost Efficiency

Leading renewable and alternative energy manufacturers demand efficient and reliable power solutions. Wind turbines are exposed to callous atmospheric conditions proven to affect and decrease the life expectancy of some of the electrical components found inside the system. For example, lightning that strikes the turbine can cause voltage fluctuations that can stress and decrease the life expectancy of transformers used in these wind turbines.

Harsh conditions and expensive cost to repair or replace components, such as transformers, inductors, reactors, etc. demand that these power solutions not only meet and exceed the high efficiency requirements essential to quality renewable energy conversions systems, but prove reliable as well.

With these requirements in mind, and proactive efforts to provide only the highest quality of power solutions to its customers, Powertronix Corporation has acquired the capability of performing in-house partial discharge testing on its products. Along with the other tests performed during Powertronix's 100 percent in process

testing procedure, not to mention stringent requirements of each of these tests, Powertronix transformers are ensured to be of the highest quality, efficiency, and reliability when installed in a customer's system.

#### What is a Partial Discharge (PD)/ Partial Discharge Testing?

Partial discharge testing tests the quantity of electrical discharges that only partially bridge the insulation between two conductive layers. Partial discharge testing consists of localized testing of these dielectric layers for the presence of these partial discharges. These partial discharges can be accredited to small gas-filled voids that can sometimes be found in dielectric layers. The detection of these discharges is important because an increased amount of partial discharges can lead to adverse effects to a transformer's insulation which include:

- Generation of UV radiation that degrades certain polymers
- Increased conductivity of the dielectric which increases the its electrical stress of the material

These effects cause a transformers dielectric layer to decay more rapidly through time which decreases the life expectancy of the overall transformer. With this in mind, Powertronix has invested in the ability and the knowledge to conduct in-house partial discharge testing.

Through the implementation of in-house partial discharge testing equipment and procedures, Powertronix is able to detect localized voids found in the insulation that would potentially

lead transformer failure.

By detecting these potential weaknesses in insulation, Powertronix can ensure the life expectancy of our power solutions' reliable performance even in the harshest of weather conditions.

As a leader in the design, development, and manufacturing of transformers for the medical and renewable industries for almost twenty years now, Powertronix continues to not only meet **but exceed** quality standards of the transformer industry. Powertronix will continue to research and develop new methods of providing only the highest quality of transformers and other power solutions for new technologies. To request more information on Powertronix, please visit our website at [www.powertronix.com](http://www.powertronix.com) for more details or call (650) 345-6800.

### Partial Discharge Testing Ensures:

- **High-Quality Powertronix Power Solution**
- **Reduced quality cost of repair of defective components in tough, environmental conditions**
- **Extended life cycle of Powertronix transformers provided to its customers**
- **Long-Term cost effective power solution for the renewable applications.**



Partial Discharge Test Setup used by Powertronix to Test Insulation Quality