



## Power Transformer Information

### Applications & Uses:

Power Transformers range in application from Motor Controls to Consumer Equipment. Power Transformers are the preferred method of producing a low AC voltage from a high AC voltage line.

### Recognized: *Insulation System vs. Construction vs. Component*

Using an insulation system, Tamura can use combinations from a variety of approved 130°C materials to quickly produce a product to customer's specifications and still apply the UL mark in production.

In a recognized construction system UL has approved a set of materials used to make a transformer, but have also examined voltage, current, creepage, clearance, and dielectric strength of a specific method of construction. These 'methods' of construction are generally approved for general use applications.

In the situation of a recognized component, UL has approved a specific component for a specific application type and thus the required UL requirements would apply.

### Inherently Limited Defined:

An Inherently Limited transformer has designed into it an impedance that limits the current output to a maximum value. This coupled with the correctly sized transformer limits the temperature under a full line voltage and shorted secondary to a safe level.

This can be accomplished in a traditionally non-Inherently limited transformer through the use of a temperature sensitive device to limit the components maximum temperature. Both are UL acceptable methods to produce a safe, reliable power system.

### Class II & Class III Defined:

The label of Class II and Class III transformers identifies that particular transformer with UL1585. If the component is not UL1585 approved, it can not be a Class II or Class III transformer. Tamura's 3FS-xxx and 3FD-xxx standard series parts as well as many custom designs fit under the UL classification.

### Ask Tamura:

Safety requirements, like nearly everything, change frequently and vary by application and use. Products also have different certifications and ratings that may affect cost and performance. Please contact your appropriate Tamura office below to speak directly with a qualified Design or Sales Engineer for more information or assistance selecting the right product for your application.

Also visit [www.ul.com](http://www.ul.com) for more information.

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