

# Frequently Asked Questions:

## Centurion® R Reactors

### What is the Short Circuit Current Rating for Centurion® R Reactors?

Reactors are exempt per UL508A SB4.2.1. Iron core reactors are not current limiting devices.

### Does it matter which way I wire through the Centurion® R Reactor?

Please refer to the wiring diagram in the installation manual.

### What is the impedance of the Centurion® R Reactors?

Impedance ranges from 1.5% to 5.0%. It is suggested to use 3% or 5% for line side reactors and 1.5% or 3.0% for load side reactors.

### How do the Centurion® R Reactors have a 600 volt rated insulation system but can be labeled as a 690 volt reactor?

Centurion® R reactors can be labeled at 690 volts based on testing performed at UL and additional insulation.

### What will the impedance be at 690 volts?

The impedance is proportionately lower ( $600/690 = 86.9\%$ ). 690V Impedance will decrease from 5.0% to 4.3% or 3.0% to 2.6%. Current ratings are standard for 600 volt ratings.

### Do you have 5% impedance Centurion® R Reactors at 690 volts?

Not base on standard motor current ratings. A 5% Z 600 volt reactor will have 4.3% Z impedance at 690 volts.

### What is the peak voltage for the 690 volt Centurion® R Reactors?

690 volt reactors can have a peak voltage of 976 volts.

### Are the 690 volt Centurion® R Reactors UL Listed?

The standard catalog units are not UL listed for 690 VAC but are UL recognized. UL Listed 690 volt reactors are available for custom units.

### Can I use the 690 volt Centurion® R Reactors on the output of my drive?

690 volt reactors can be placed on the output of a variable frequency drive without de-rating.

### Which safety standards do Centurion® R Reactors meet?

Centurion® R Reactors meet UL safety standards and have the UL Listed mark. Centurion® R Reactors are also CE-marked.

### What is the difference between UL Listed and UL Recognized?

The UL Listed Mark on a product is the manufacturer's representation that samples of that complete product have been tested by UL to nationally recognized safety standards and found to be free from reasonably foreseeable risk of fire, electric shock and related hazards. UL's Component Recognition Service covers the testing and evaluation of component products that are incomplete or restricted in performance capabilities. These components will later be used in complete end products or systems Listed by UL.

### Which Centurion® R Reactors are available as UL Listed products?

All Centurion® R reactors, equal or under 600 Volts, are available as a UL Listed product.



**What is the advantage of having a UL Listed Centurion® R Reactor?**

The UL Listed mark provides a higher level of acceptability. Centurion® R Reactors that are UL Listed meet the same safety standards but are viewed differently by Underwriters Laboratories. They consider UL Listed products as being complete end-products, versus components that will be used as part of a larger system. While a UL Recognized Reactor may adequately address the system's needs, the field inspection may require UL Listed products in a given installation. UL Listed Reactors meet a broad range of installation requirements. UL Recognized products may require an addition to a user's UL file, whereas UL Listed products may not.

**What type of enclosure do I need for my Centurion® R Reactor?**

The enclosure will depend on the degree of protection the reactor must have against indoor and outdoor environments. Centurion® R Reactors offers Type 1 and Type 3R enclosures.

**What is the intended use of UL Type 1 enclosures for Centurion® R?**

When your application is indoors UL Type 1 enclosures provide protection against a limited amount of falling dirt, human protection and vents to provide convection cooling for the unit. Enclosed Centurion® R Reactors come with Type 1 enclosures.

**What is the intended use of UL Type 3R enclosures for Centurion® R?**

Outdoor applications require an enclosure that provides a degree of protection against falling rain, snow and dirt but are not dust tight. UL Type 3R enclosures are intended for outdoor use but can also be used indoors.

**Why are the Centurion® R enclosures so much larger than the reactor?**

Enclosures must provide enough space for heat dissipation and room for wire bending.