

PRC Bushing Design Enhancement

PCORE has enhanced the design of low-voltage PRC bushings.

An extra capacitance layer has been added to the outside of the core. This layer is permanently connected to the flange.

The layer was added to eliminate the effects of the potting compound when measuring the C_2 capacitance and power factor.

Before the change was made, the test tap was connected to the last foil in the core.

(See Figure 1) The C_2 capacitor was formed between the core and the aluminum flange casting. A significant part of the dielectric of this capacitor was the epoxy potting compound that was placed between the flange and the core.

This compound was formulated for its mechanical properties and has a high power factor. Since the potting compound is shorted in service, the electrical properties of the material have NO EFFECT on the operation of the bushings.

PCORE PRC bushings with the enhanced core designs have an extra foil which is permanently connected to the flange. The test tap is connected to a second foil at a slightly smaller diameter. (See Figure 2) The C_2 capacitor on these bushings is formed between two foils within the resin impregnated core.

The result is a much lower C_2 power factor, in the same range as the C_1 power factor.

Bushings with the enhanced design began shipping in May of 2000. They can be identified by the higher C_2 capacitance values. Typically, they will be double or more than the capacitance of the original designs.

The original design cores and flanges are being shipped first, but it is possible to receive both original and enhanced designs of the same catalog number, on the same order.

The enhancement was made to address field questions regarding the C_2 power factors on PCORE PRC bushings. **THE QUALITY AND PERFORMANCE OF THE TWO DESIGNS ARE IDENTICAL.**

The C_2 values are NOT listed on the nameplates of PRC bushings. If you have any questions, please contact the factory.

