



## Technical Description

### ERMCO Components, Inc. SURE MAKE® HIGH VOLTAGE BUSHING WELL 35kV CLASS

#### Model Number 9U03D

The *ERMCO Components, Inc.* SURE MAKE high voltage bushing well utilizing a polyester thermoset compound meets or exceeds all industry and ECI requirements. The bushing well is designed for the termination of primary leads in oil filled devices such as padmount transformers. The bushing well mating interface conforms to the ANSI/IEEE Std. 386 for Separable Insulated Connectors and will accept switch modules (bushing well inserts) complying with the Standard.

The Sure Make bushing well is designed for external clamping and supplied with or without a loose gasket. Simply add “C” to the end of the model number to receive a loose gasket and steel flange with the bushing well. Simply add “G” to the end of the model number to receive a loose gasket with the bushing well.

External clamping hardware is also available: 9U09AAW267 - Tin Plated Carbon Steel  
9U09AAW268 - Stainless Steel

#### DESIGN FEATURES:

- Insulated body is molded of a polyester thermoset compound designed for excellent electrical and mechanical properties.
- The ground shield is oil resistant.
- The connecting stud is a copper alloy molded into the body to provide a high strength leak free bond.
- Gasket location and compression are controlled at the O.D. by the molded in gasket retaining ring.
- Dimensions comply with ANSI/IEEE 386 Std for Separable Insulated Connectors.
- Uses tank mounting hole of 2.562 inches diameter.
- Recommended torque values: External clamp is 80 inch-lbs, Internal connection is 80 inch-lbs,
- The removable stud version is tin plated for corrosion resistance and ease of removal.
  - Use a 5/32 allen wrench to replace stud, insert non-threaded lead-end first and torque to 100 inch-lbs.
  - (Order replaceable studs separately - CAT# 9U09AAW271)
- Nitrile gasket - CAT # 7920K108P38

#### RATINGS:

- |  |                    |
|--|--------------------|
| • Maximum Continuous Line to Ground Voltage        | 21.1kV rms         |
| • Continuous Current                               | 200 Amp rms        |
| • Short-Time Current Rating:                       |                    |
| 0.17 second duration                               | 10,000 Amp rms Sym |
| 3.0 second duration                                | 3,500 Amp rms Sym  |
| • Basic Impulse Level (1.2 x 50 micro-second wave) | 150kV Crest        |
| • 60 Hertz Hipot (one minute)                      | 54kV rms           |
| • Corona Extinction Voltage                        | 26kV rms           |



## Certified Test Report

### ERMCO Components, Inc. SURE MAKE® HIGH VOLTAGE BUSHING WELL 35kV CLASS

**Model Numbers 9U03D, 9U03B**

The ERMCO Components, Inc. SURE MAKE high voltage bushing well utilizing a polyester thermoset compound meets or exceeds all industry and ECI requirements.

#### **ELECTRICAL PERFORMANCE:**

- **Maximum Continuous Line to Ground Voltage** **21.1kV rms**
- **Continuous Current** **200 Amp rms**
- **Short-Time Current Rating:**
- **0.17 second duration** **10,000 Amp rms Sym**
- **3.0 second duration** **3,500 Amp rms Sym**
- **Basic Impulse Level (1.2 x 50 micro-second wave)** **150kV Crest**
- **60 Hertz Hipot (one minute)** **54kV rms**
- **Corona Extinction Voltage** **26kV rms**

#### **MECHANICAL PERFORMANCE:**

- The bushing well interface conforms to ANSI / IEEE Std 386-1985 for separable insulated connections.
- Direct pushout force exceeds 1500 lbf
- Breaking torque exceeds 25 ft-lbs on molded-in studs
- Seal integrity between the molding compound and the current carrying stud certified using Helium mass spectrometer at 1.2 x 10<sup>-6</sup> atm cc/sec sensitivity.

#### **CHEMICAL PERFORMANCE:**

- Passes recognized 10C transformer oil compatibility test.
- Passes recognized silicone fluid compatibility test.
- Material retains mechanical strength after 120 hrs exposure to insulating fluids at 140°C.

#### **THERMAL PERFORMANCE:**

- The ERMCO Components, Inc. bushing well exhibited no cracking and passed electrical testing after thermal cycling between -40°C and 150°C (10 cycles, one cycle / day, six hours transition, six hours dwell).

**Date:** 01/12/98

**Name:** Finn Hassing

**Title:** Sr. Engineer, ECI