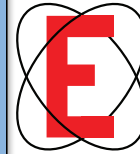
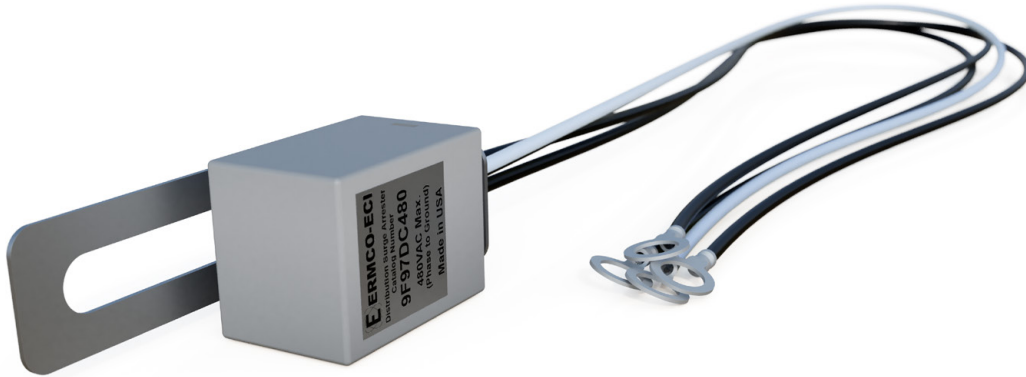


# Low Voltage Distribution Class MOV Surge Arrester for 1Ø and 3Ø Transformer Protection



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ERMCO Components Incorporated (ECI) introduces the Low Voltage Distribution Class Surge Arrester (*LVDA*) for use in protection applications where high energy handling capability is required.

It is available in three wire single phase, and four wire three phase configurations. Nominal voltages of both 250 and 480 are available.

## BEYOND THE STANDARD

The *LVDA* has been designed and tested in accordance with ANSI/IEEE C62.11 Light Duty Distribution Class requirements. Its primary application is for protection of the secondary side of pole or pad type distribution transformers. Mounting provisions and available lead configurations allow for easy installation on both types of transformers. The energy handling capability of the *LVDA* of 40kA High Current Short-duration 4/10µs current wave is four times that of the Secondary Class Surge Arresters assuring extremely long service life.

Our design uses an integral mounting bracket for attachment directly to a bolt beneath the ground bushing on a pad or pole type transformer. The UV stabilized PET Polyester housing of the *LVDA* is suitable for external mounting.

Line leads on the *LVDA* are #10 AWG stranded copper, 18 inches in length. It is suggested that leads be shortened as much as possible to reduce voltage “let through” to the protected equipment.

Every assembly consists of high quality individually manufactured and tested MOV Disks. Once pressed and sintered they are visually inspected, an electrode soldered on, then tested. Disks passing the tests are then epoxy coated, cured, and tested for 1ma positive and negative.

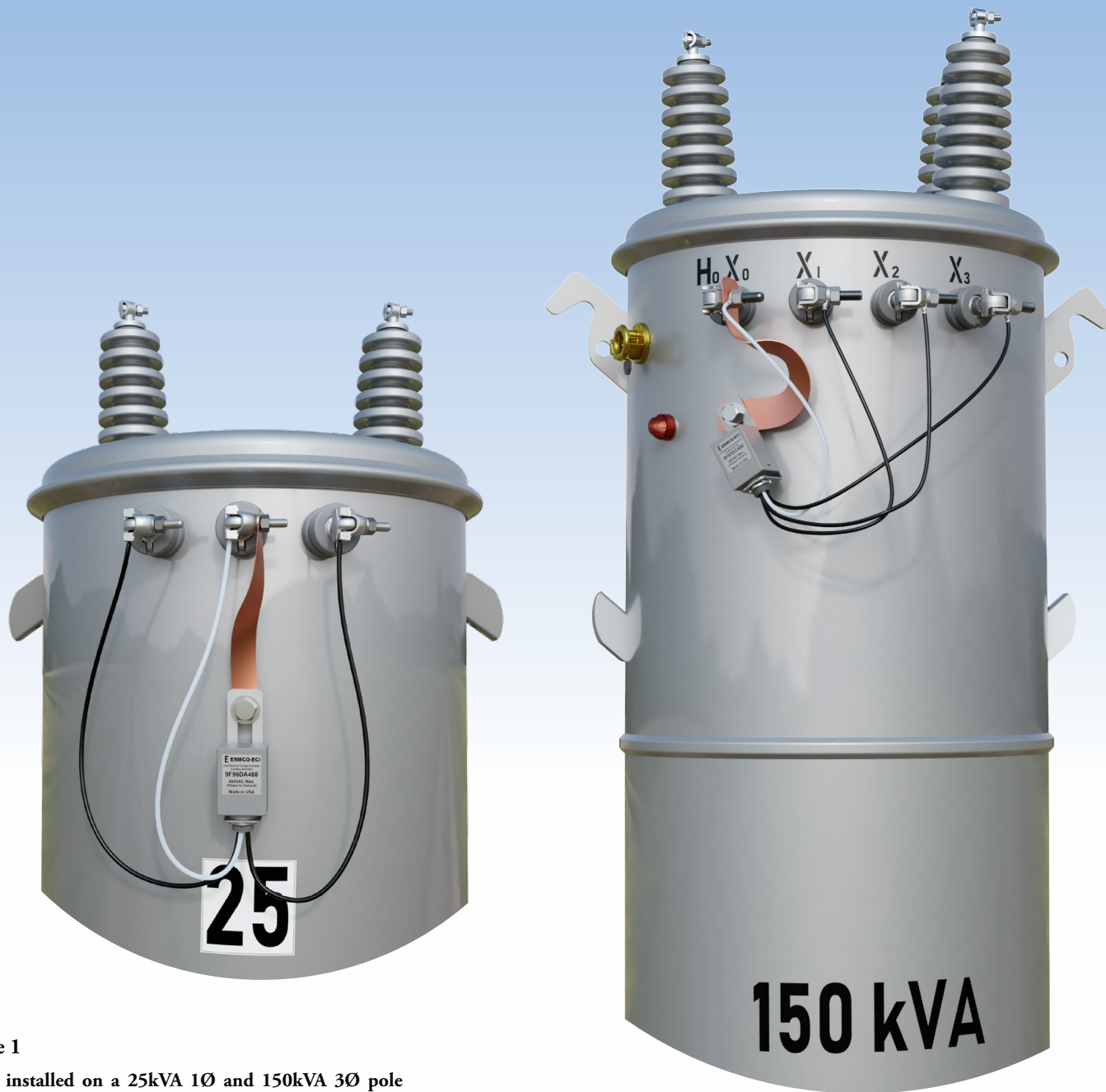
The MOV Disk assemblies are then soldered to a copper busbar along with the line and ground leads. This is then assembled into the housing, which is then fully potted to assure extremely long life in the most extreme environments. Final product inspection and electrical tests are performed on the completed arrester prior to packaging for shipment.

The completely assembled *LVDA* arrester is 100% tested at our Greenville, Tennessee production facility:

- Complete physical inspection.
- Varistor voltage at 1mA test current.



For more information about the LVDA, contact your Ermco Components representative or call (877) 267-1855



**Figure 1**  
LVDA installed on a 25kVA 1Ø and 150kVA 3Ø pole type transformers

**Table 1**  
Protective Characteristics

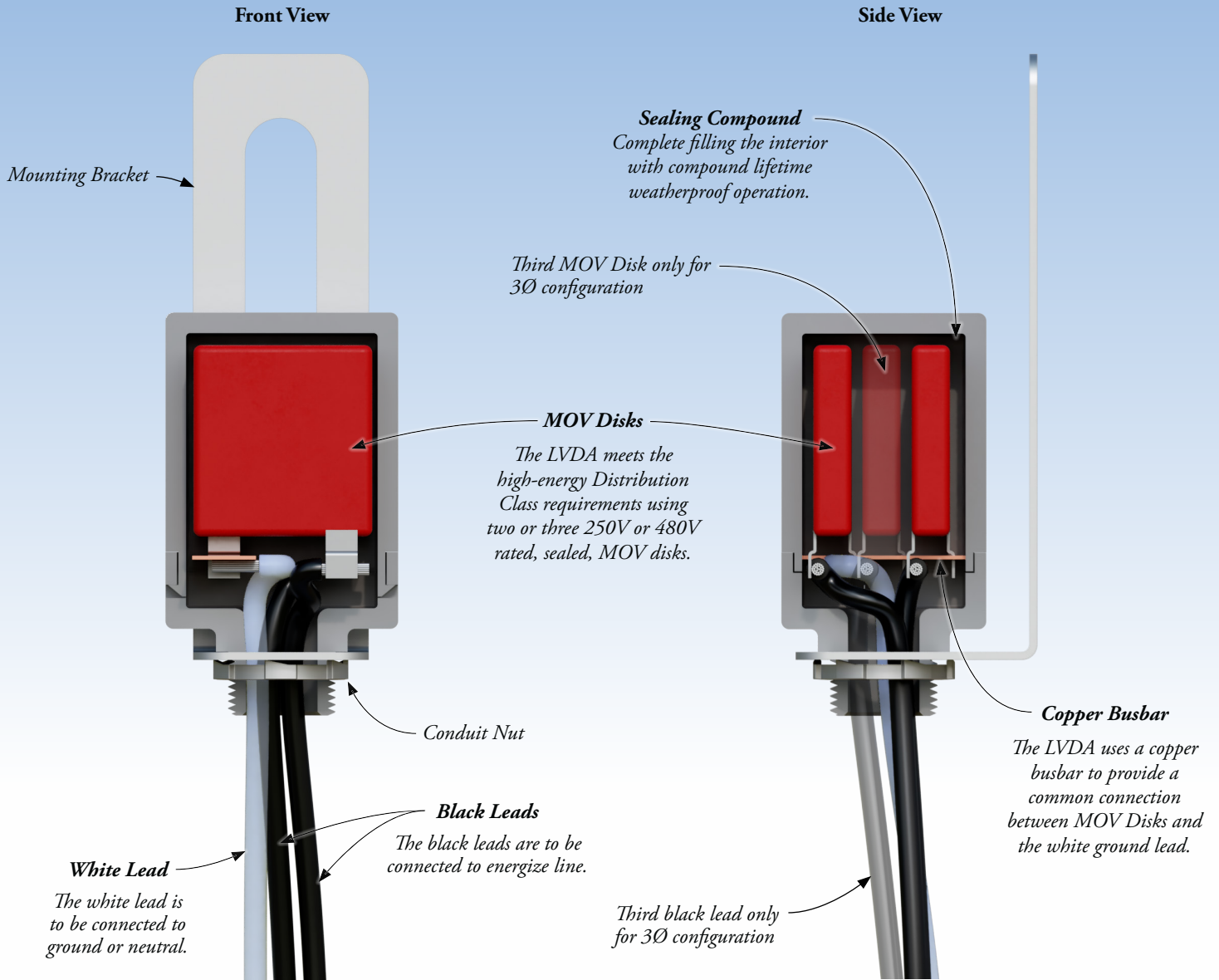
Arrester Rating (V rms)	250	480	
MCOV (V rms)	250	480	
Front of Wave Protective Level (kV Crest) 5kA	1.2	2.1	
Maximum Discharge Voltage (kV Crest) 8/20µs Current Wave	1.5 kA	0.70	1.3
	5 kA	0.82	1.6
	10 kA	0.95	1.9
	20 kA	1.2	2.2
	40 kA	1.4	2.7

**Table 2**  
Insulation Withstand Voltages

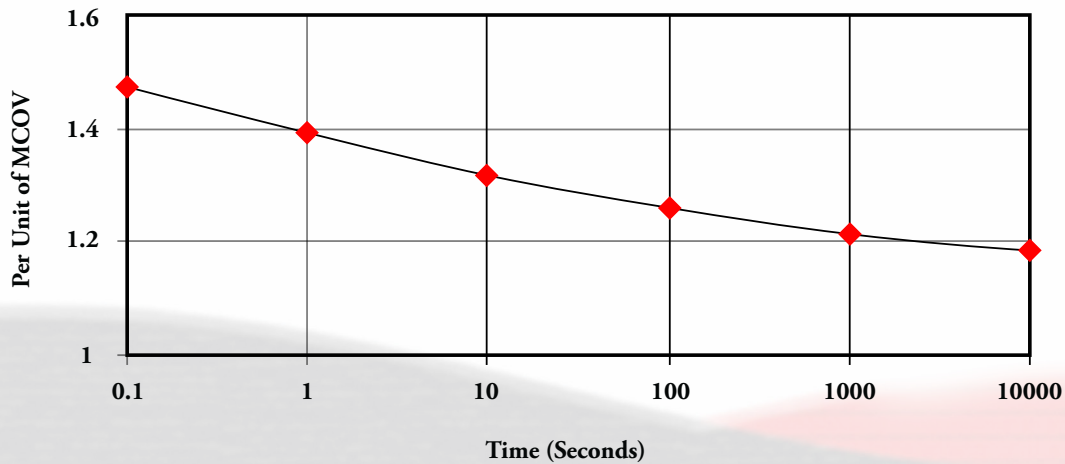
1.2/50 Impulse (kV Crest)	30
1 Minimum Dry (kV rms)	10
10 Second Wet (kV rms)	6

**Table 3**  
Performance Test Characteristics

High-Current, Short-Duration	2 Discharges of 40 kA Crest, 4/10µs Current Wave
Low-Current, Long-Duration	20 Surges of 75 A-2000 Microsecond Duration
Duty Cycle	22 Operations of 5 kA Crest, 8/20µs Current Wave

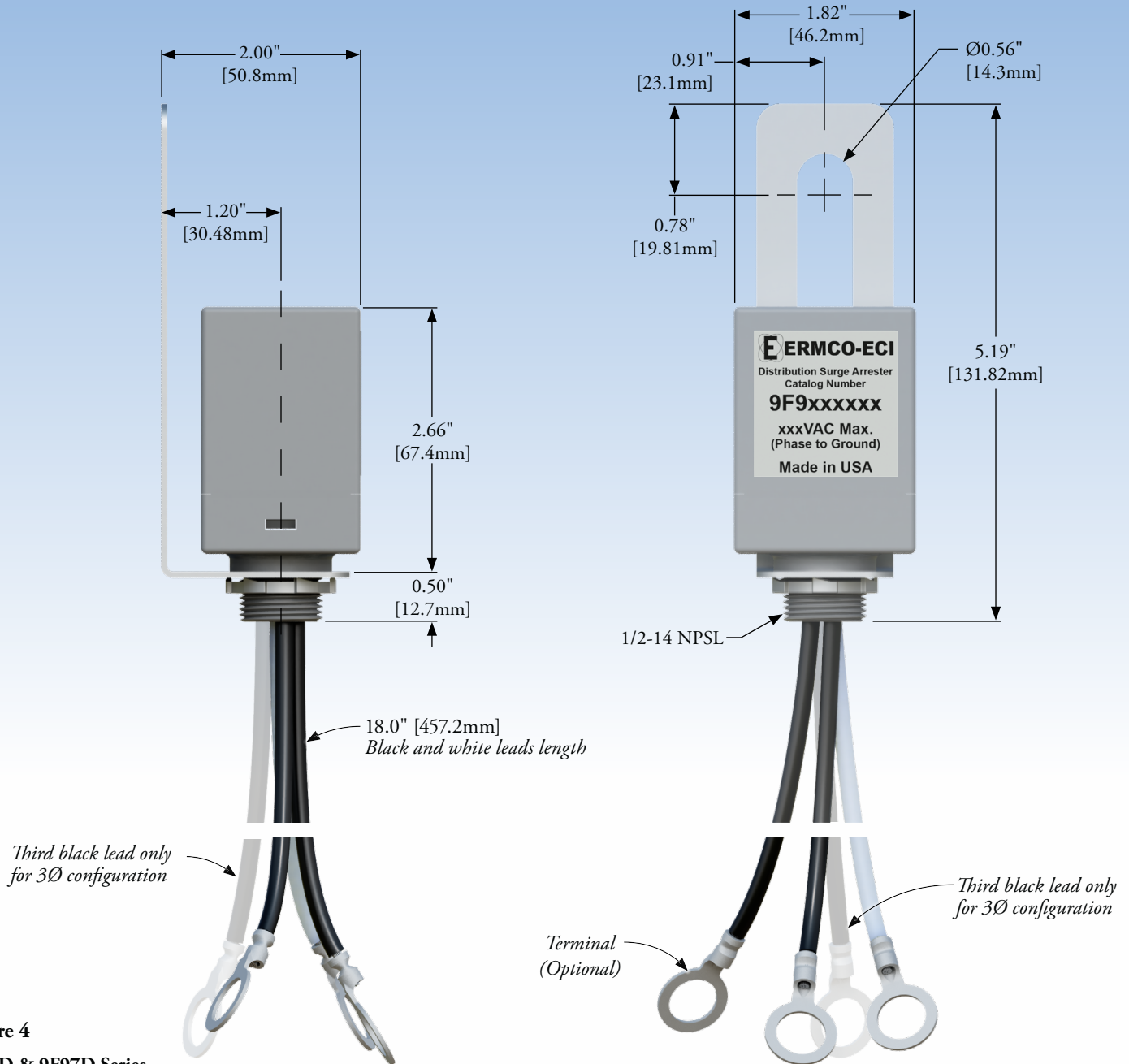


**Figure 2**  
Section View of the LVDA



**Figure 3**  
Temporary Overvoltage Capability

# 1Ø and 3Ø LVDA Dimensions and Ordering Information



**Figure 4**  
**9F96D & 9F97D Series**  
 (1Ø and 3Ø LVDA Surge Arrester)

PRIMARY DIMENSIONS ARE INCHES  
 SECONDARY DIMENSIONS [ ] ARE MM

Note: Dimensions are given for reference only.

## Ordering Information

**Table 4**  
**1Ø Low Voltage Distribution Arrester**

Catalog Number	Description	Arrester Rating (V rms)
9F96DA250	No Terminal	250
9F96DA480	No Terminal	480
9F96DB480	3/8" Terminal	480
9F96DC480	1/2" Terminal	480

**Table 5**  
**3Ø Low Voltage Distribution Arrester**

Catalog Number	Description	Arrester Rating (V rms)
9F97DA480	No Terminal	480
9F97DB480	3/8" Terminal	480
9F97DC480	1/2" Terminal	480