

Figure 7. Temporary overvoltage curve. No prior duty – 60° C ambient.

Temporary overvoltage (TOV) capability

The ability to withstand 60 Hz overvoltage conditions [Temporary Overvoltage (TOV)] is shown in Figure 7 for all VariSTAR distribution-class arresters. The graph shows for a given voltage magnitude (on a Per Unit of MCOV basis), the time an arrester can survive a TOV condition without going into thermal runaway.

Ordering information

VariSTAR distribution-class arresters, an Eaton's Cooper Power series product, are supplied in a variety of customer defined options. The catalog system employed lets the number define the features of the arrester. Table 9 shows the catalog numbers for several of the most common arrester styles. Table 10 shows what each alphanumeric character in the catalog number represents and lists several of the available options defined by these characters. A wide variety of option combinations are available, allowing users to customize the arrester to their specific needs. For further options contact your Eaton sales engineer.

Table 9. Catalog Numbers – VariSTAR Distribution-Class Surge Arresters

Arrester Rating	With Isolator and Insulated Hanger (Figure 3)	With Isolator, Insulated Hanger and NEMA Cross-Arm Bracket (Figure 4)	With Insulated Hanger Without Isolator (Figure 6)	With Isolator, Insulated Hanger and Transformer Mounting Bracket (Figure 5)
3	U*S03030A1A1A1A	U*S03030A1A1B1A	U*S03030A0A1A1A	U*S03030A1C1C1C
6	U*S06040A1A1A1A	U*S06040A1A1B1A	U*S06040A0A1A1A	U*S06040A1C1C1C
9	U*S09050A1A1A1A	U*S09050A1A1B1A	U*S09050A0A1A1A	U*S09050A1C1C1C
10	U*S10050A1A1A1A	U*S10050A1A1B1A	U*S10050A0A1A1A	U*S10050A1C1C1C
12	U*S12060A1A1A1A	U*S12060A1A1B1A	U*S12060A0A1A1A	U*S12060A1C1C1C
15	U*S15070A1A1A1A	U*S15070A1A1B1A	U*S15070A0A1A1A	U*S15070A1C1C1C
18	U*S18080A1A1A1A	U*S18080A1A1B1A	U*S18080A0A1A1A	U*S18080A1C1C1C
21	U*S21090A1A1A1A	U*S21090A1A1B1A	U*S21090A0A1A1A	U*S21090A1C1C1C
24	U*S24100A1A1A1A	U*S24100A1A1B1A	U*S24100A0A1A1A	U*S24100A1C1C1C
27	U*S27110A1A1A1A	U*S27110A1A1B1A	U*S27110A0A1A1A	U*S27110A1C1C1A
30	U*S30120A1A1A1A	U*S30120A1A1B1A	U*S30120A0A1A1A	U*S30120A1C1C1A
33	U*S33130A1A1A1A	U*S33130A1A1B1A	U*S33130A0A1A1A	U*S33130A1C1C1A
36	U*S36140A1A1A1A	U*S36140A1A1B1A	U*S36140A0A1A1A	U*S36140A1C1C1A

*Digit 2 Option: **N** = Normal-Duty, **H** = Heavy-Duty, **R** = Riser Pole.

Note: All catalog numbers listed above include a universal wildlife protector.

Table 10. VariSTAR Distribution-Class Arrester UltraQUIK™ Catalog Numbering System

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
U		S												

Catalog Number Digits

1 = UltraSIL Polymer-Housed Arrester, **U**

2 = Arrester Class: **N** = Normal-Duty **H** = Heavy-Duty **R** = Riser Pole

3 = Arrester Type: **S** = VariSTAR

4 & 5 = Arrester Rating (MCOV): **03** = 3 kV (2.55 kV) **12** = 12 kV (10.2 kV) **21** = 21 kV (17.0 kV) **30** = 30 kV (24.4 kV)
06 = 6 kV (5.1 kV) **15** = 15 kV (12.7 kV) **24** = 24 kV (19.5 kV) **33** = 33 kV (27.0 kV)
09 = 9 kV (7.65 kV) **18** = 18 kV (15.3 kV) **27** = 27 kV (22.0 kV) **36** = 36 kV (29.0 kV)
10 = 10 kV (8.4 kV)

6 & 7 = Housing Code per Arrester Rating (Select from Table below):

★ = Standard Creepage Housing **O** = Optional Creepage Housings

Digits 6 & 7	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
Leakage Distance (in.)	7.2	10.1	13.0	15.9	18.8	21.7	24.6	27.5	30.4	33.3	36.2	39.1	42.0	44.9	47.8
Arrester Rating (kV rms)															
3	★	O													
6		★	O	O											
9			★	O	O	O									
10			★	O	O	O									
12				★	O	O	O	O							
15					★	O	O	O	O						
18						★	O	O	O	O					
21							★	O	O	O	O				
24								★	O	O	O	O			
27									★	O	O	O	O		
30										★	O	O	O	O	
33											★	O	O	O	O
36												★	O	O	O

8 = Line Terminal Wire: **0** = No Line Terminal Wire

2 = 12", #6 AWG Insulated Wire, 1 ring terminal/1 end stripped 1.25"

5 = 18", #6 AWG Insulated Wire, 1 ring terminal/1 end stripped 1.25"

8 = 30", #6 AWG Insulated Wire, 1 ring terminal/1 end stripped 1.25"

3 = 12", #6 AWG Insulated Wire, 2 ring terminals

6 = 18", #6 AWG Insulated Wire, 2 ring terminals

9 = 30", #6 AWG Insulated Wire, 2 ring terminals

9 = Line Terminal Options

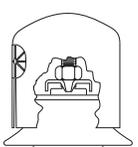
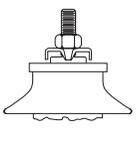
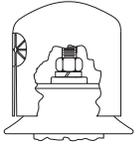
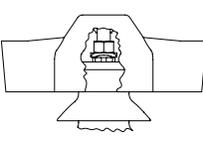
				
A = Silicon Bronze Nut, Stainless Steel Wire Clamp and Universal Wildlife Protector	B = Silicon Bronze Nut and Stainless Steel Wire Clamp	C = No Hardware	D = Silicon Bronze Nut, Lock Washer, Flat Washer and Universal Wildlife Protector (For leads with ring terminals)	X = Silicon Bronze Nut, Stainless Steel Wire Clamp and Line Terminal Wildlife Guard. Reference Figure 8 for dimensional information.

Table 10. VariSTAR Distribution-Class Arrester UltraQUIK™ Catalog Numbering System (continued)

1 U	2	3 S	4	5	6	7	8	9	10	11	12	13	14	15
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10 = Isolator, with 3/8" stainless steel grounding stud

0 = No Isolator

2 = Red Isolator

4 = Blue Isolator

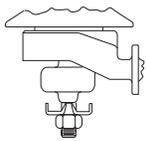
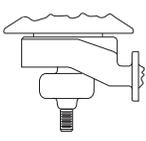
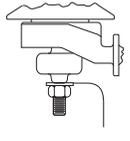
6 = Orange Isolator

1 = Black Isolator (**Standard**)

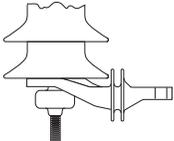
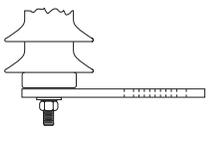
3 = Yellow Isolator

5 = White Isolator

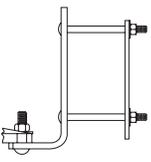
11 = Ground Terminal Options

			
A = Wire Clamp with Silicon Bronze Nut (Shown with optional Isolator and Insulated Hanger)	B = No Hardware (Shown with optional Isolator and Insulated Hanger)	C = Copper Transformer Grounding Strap with Stainless Steel Lock Washer & Silicone Bronze Nut (Shown with optional Isolator and Insulated Hanger)	D = Stainless Steel Washer, Lock Washer, Silicone Bronze Nut (Shown with optional Isolator and Insulated Hanger)

12 = Base Configuration Options

		
0 = Insulated Base (Base Mounted Arrester) (Requires "0" in Digit 10)	1 = Insulated Hanger (Required with optional isolator) (Available only if Digits 6 & 7 are Housing Options 15 or less*) * For more information, contact your Eaton representative.	2 = Insulated Base With Conductive Mounting Bracket (Requires "0" in Digit 10 and "D" in Digit 11)

13 = Mounting Bracket Options

			
A = Without an Additional Mounting Bracket	B = NEMA Cross-Arm Bracket (Arrester Mounting Hardware Included) (Requires "1" or "2" in Digit 12) Refer to Figure 11 for dimensional information	C = Transformer Bracket (Arrester Mounting Hardware Included) (Requires "1" or "2" in Digit 12) (Reference Figures 12 & 13 for bracket dimensions by rating)	D = Option C Plus Transformer Mounting Hardware (2 each — 1/2", 13-UNC x 3/4" Bolts, Flat Washers, and Lock Washers) (Requires "1" or "2" in Digit 12) (Reference Figures 12 & 13 for bracket dimensions by rating)