

Amp-trap® — E Rated Medium Voltage Fuses 5.5 kV and 15.5 kV

UL Listed

5.5 kV and 15.5 kV E-rated **AMP-TRAP** fuses from Gould Shawmut are now available in an expanded range of ratings — and all have been tested and certified by UL! Underwriters Laboratories has created a whole new category, "JEEG", *Fuses Over 600 Volts*, for this class of product.

Gould Shawmut is the first manufacturer to obtain a listing from UL under this category (File No. E — 143362). The listing covers a complete range of sizes and mounting configurations, in the following three series:

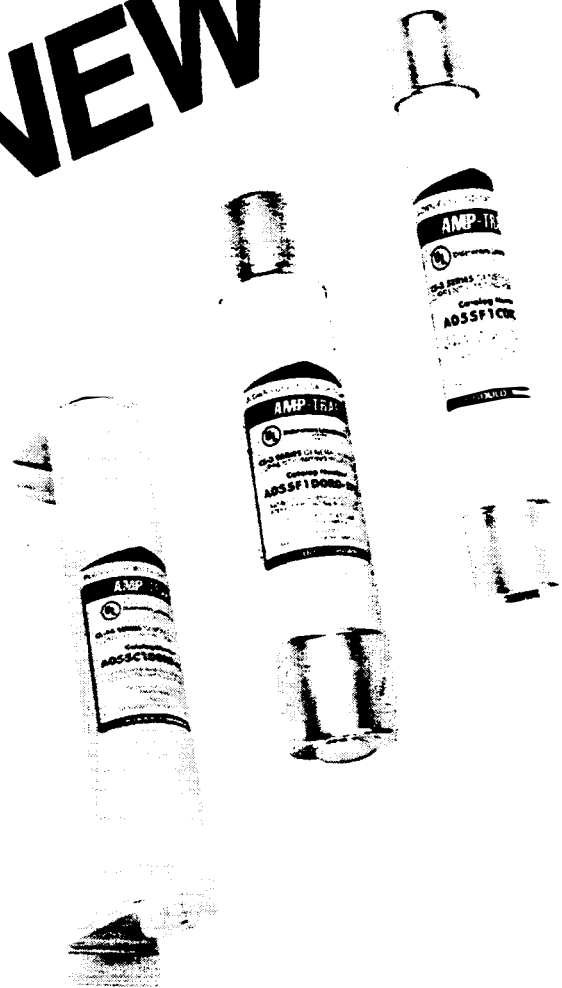
CS—3 Series — Have either 2" or 3" diameter barrels with ferrules that are generally mounted in clips with back-up springs. This style of construction is the most commonly produced and therefore allows dimensional interchangeability with many other original equipment fuses. CS—3 Series fuses are designed to provide equal or better electrical performance than other brands of fuses.

As systems grow users often need to increase the ampere rating. In order to make this easier, these fuses are available in 3" diameter down to 10E amperes. Increasing the ampere rating would not require changing fuse clips. CS—3 Series fuses are also available in 2" diameter from 5E to 65E amperes at 5.5 kV and 5E to 30E at 15.5 kV.

Bolt—in Series — This Series was developed to provide high ampere fuses for 5.5 kV class applications. Due to the requirement for a solid electrical connection for high current sizes, they are supplied only in a configuration where they must be bolted directly to the equipment bus or terminal pads. Available ampere sizes are 750E and 900E.

CL—14 Series — Utilizes the unique "Clip—Lock" mounting which provides a superior electrical and mechanical connection that also makes installation and removal of the fuses easier. The "L" shaped end brackets allow the fuse to simply be hung in place before tightening the connection with the locking lever.

NEW



UL Listed E—Rated Fuses Feature:

5E to 900E Ratings at 5.5 kV
5E to 300E Ratings at 15.5 kV
Current—Limiting
Non—Venting
High Interrupting Ratings
Integral Blown—Fuse Indicator

AMP-TRAP medium-voltage fuses provide numerous benefits over other brands of current-limiting fuses and non-current-limiting boric acid expulsion fuses. These benefits include:

- ◆ The only medium-voltage fuses that are designed, tested and routinely inspected for conformance to UL standards
- ◆ Extensive range of voltages and ampere sizes
- ◆ Silent, non-venting interruption
- ◆ Only minimal electrical clearances needed – no exhaust clearances required
- ◆ Current-limiting action minimizes damage to the system components
- ◆ Controlled arc voltages
- ◆ Blown fuse indicator on every fuse
- ◆ Various mounting configurations: Ferrule, Bolt-in, and Clip-Lock

NEW CATALOG NUMBERING SYSTEM FOR *UL Listed* MEDIUM-VOLTAGE E-RATED FUSES

New catalog numbers have been assigned to this new series of fuses. The following chart shows how a typical catalog number is constructed. Positions 1 through 10 must be completed for all catalog numbers. Position 11 is always a dash (–) to identify the ampere rating to the right. Positions 12 through 15 are used as needed and do not all have to be filled.

A 1	0 2	5 3	5 4	F 5	1 6	D 7	0 8	R 9	0 10	– 11	1 12	0 13	0 14	E 15
											Ampere Rating : 5E, 7E, 10E, 15E, 20E, 25E, 30E, 40E, 50E, 65E, 80E, 100E, 125E, 150E, 175E, 200E, 225E, 250E, 300E, 350E, 400E, 450E, 500E, 600E, 750E, 900E			
											Revision No.: 0 – 9			
											Revision			
											Special Features: 0 (none) or A to Z (omit letters I and O)			
											Barrel Diameter: C = 2.0" (50.8 mm) D = 3.0" (76.2 mm)			
											No. of Barrels: 1, 2, or 3			
											Style: B = Bolt-in C = Clip-Lock F = Ferrule			
											Maximum Voltage Rating: 055 = 5,500 Volts 155 = 15,500 Volts			
A = AMP-TRAP Fuse														

Application

Information

Gould Shawmut E-rated power fuses are used to protect medium-voltage transformers and distribution systems. They are classified as "general purpose current-limiting fuses" in accordance with ANSI/IEEE C37.40 and are appropriate for use indoor or outdoor in a weatherproof enclosure. ANSI Standard C37.46 outlines the Specifications for Power Fuses and C37.41 outlines the Design Tests.

A general purpose current-limiting power fuse is one that is capable of interrupting all currents from the rated interrupting current down to the current that causes melting of the fusible element in one hour.

An E-rated fuse is defined by ANSI C37.46 to have melting (opening) characteristics as follows:

100E and below – must melt in 300 seconds (5 minutes) at 200% to 240% of rating.

Above 100E – must melt in 600 seconds (10 minutes) at 220% to 264% of rating.

Example – A 100E fuse will melt in 300 seconds with an applied current of 200 to 240 amperes.

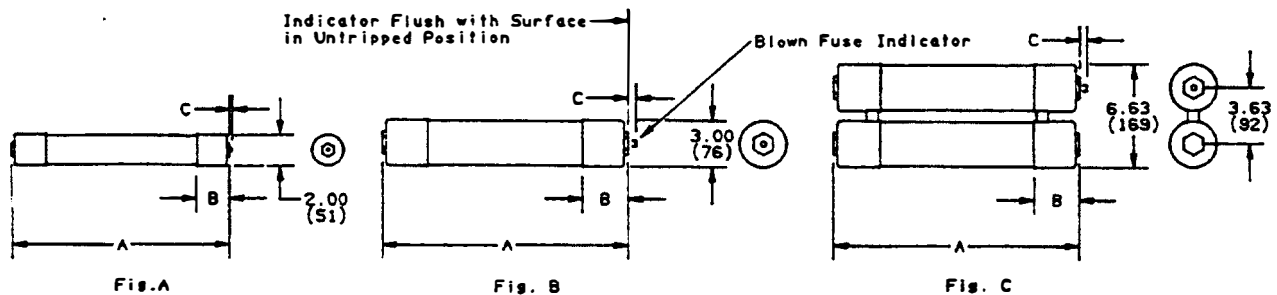
Physical Interchangeability – With three different mounting configurations available, Gould Shawmut UL listed E-rated fuses are physically interchangeable with most older Gould Shawmut fuses (including CL-14 fuses with the ITE label), as well as many other brands of original equipment fuses. For assistance in making the proper selection, request the cross reference bulletin for the brand of fuse you have been using from your Gould Shawmut Sales Representative or Authorized Distributor. In some cases the fuse length may not be the same. This would require a repositioning of the mounting channel that the clips and the stand-off insulators are mounted on.

Electrical Interchangeability – Gould Shawmut *AMP-TRAP* fuses can generally replace a fuse of equal rating, even if of another brand, without affecting the coordination with adjacent devices. However, it is recommended that the time-current curves be compared in order to ensure that proper coordination is maintained. Most *AMP-TRAP* fuses have a higher speed ratio than other brands making them easier to coordinate and to maintain selectivity for a system.

Amp-Trap® – E Rated

Medium Voltage Fuses

CS-3 Series – Ferrule Mounted



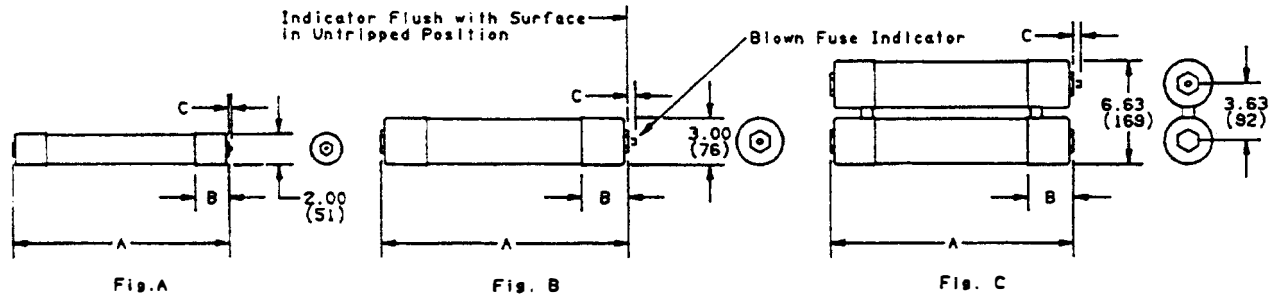
CS—3 Series — 5.5 kV

NEW CATALOG NUMBER	OLD CATALOG NUMBER	AMPERE RATING	NUMBER OF BARRELS	FIG.	DIMENSIONS INCHES (mm)			INTERRUPTING RATING RMS SYM.* AMPERES
					A	B	C	
5.5 kV Max. – Ferrule Mounted Style – 12" (305mm) Clip Centers – 2" (50.8mm) Barrel Diameter								
A055F1CORO – 5E 7E 10E 15E 20E 25E 30E 40E 50E 65E	A550X 5E-1B 7E-1B 10E-1B 15E-1B 20E-1B 25E-1B 30E-1B 40E-1B 50E-1B 65E-1B	5E 7E 10E 15E 20E 25E 30E 40E 50E 65E	1	A	14.11 (358)	2.2 (56)	.19 (4.8) Tripped Force 1 Lb.	63,000
5.5 kV Max. – Ferrule Mounted Style – 12" (305mm) Clip Centers – 3" (76.2mm) Barrel Diameter								
A055F1DORO – 10E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E 150E 175E 200E	A550X 10E-1F 15E-1F 20E-1F 25E-1F 30E-1 40E-1 50E-1 65E-1 80E-1 100E-1 125E-1 150E-1 175E-1 200E-1	10E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E 150E 175E 200E	1	B	15.88 (403)	3.0 (76)	0.5(13) Tripped Force 2 Lbs.	63,000
A055F2DORO – 250E 300E 350E 400E 450E	250E-1 300E-1 350E-1 400E-1 450E-1	250E 300E 350E 400E 450E	2	C				

* RMS ASYM. AMPERES = RMS SYM. AMPERES x 1.6

Amp-Trap® – E Rated Medium Voltage Fuses

CS-3 Series – Ferrule Mounted (cont'd)



CS – 3 Series – 15.5 kV

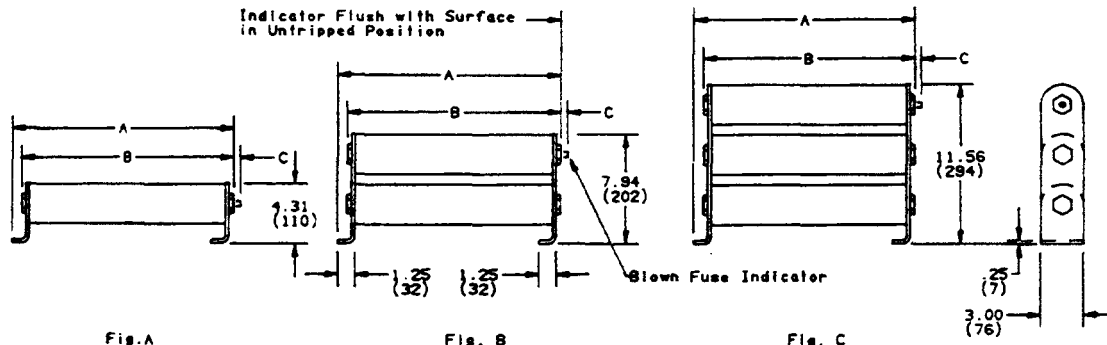
NEW CATALOG NUMBER	OLD CATALOG NUMBER	AMPERE RATING	NUMBER OF BARRELS	FIG.	DIMENSIONS INCHES (mm)			INTERRUPTING RATING RMS SYM.* AMPERES
					A	B	C	
15.5 kV Max. – Ferrule Mounted Style – 15" (381mm) Clip Centers – 2" (50.8mm) Barrel Diameter								
A155F1CORO – 5E 7E 10E 15E 20E 25E 30E	A155OX – 5E-1B 7E-1B 10E-1B 15E-1B 20E-1B 25E-1B 30E-1B	5E 7E 10E 15E 20E 25E 30E	1	A	17.03 (433)	2.2 (56)	.19 (4.8) Tripped Force 1 Lb.	50,000
15.5 kV Max. – Ferrule Mounted Style – 15" (381mm) Clip Centers – 3" (76.2mm) Barrel Diameter								
A155F1DORO – 10E 15E 20E 25E 30E 40E 50E A155F2DORO – 65E 80E 100E	A155OX – 10E-1F 15E-1 20E-1 25E-1 30E-1 40E-1 50E-1 65E-1 80E-1 100E-1	10E 15E 20E 25E 30E 40E 50E 65E 80E 100E	1 2	B C	18.87 (479)	3.0 (76)	0.5(13) Tripped Force 2 Lbs.	50,000
15.5 kV Max. – Ferrule Mounted Style – 18" (457mm) Clip Centers – 3" (76.2mm) Barrel Diameter								
A155F1DORO – 65E 80E 100E A155F2DORO – 125E 150E 175E 200E	A155OX – 65E-1D 80E-1D 100E-1D 125E-1D 150E-1D 175E-1D 200E-1D	65E 80E 100E 125E 150E 175E 200E	1 2	B C	21.75 (552)	3.0 (76)	0.5(13) Tripped Force 2 Lbs.	50,000

* RMS ASYM. AMPERES = RMS SYM. AMPERES x 1.6

Amp-Trap® – E Rated Medium Voltage Fuses

CL-14 Series

CL-14 Series — 5.5 kV and 15.5kV Clip—Lock Mounted



NEW CATALOG NUMBER	OLD CATALOG NUMBER	AMPERE RATING	NUMBER OF BARRELS	FIG.	DIMENSIONS INCHES (mm)			INTERRUPTING RATING RMS SYM.* AMPERES
					A	B	C	
5.5 kV Max. – Clip-Lock Style – 15.25" (387mm) Clip Centers – 3" (76.2mm) Barrel Diameter								
A055C1DORO – 10E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E 150E	225-007- 937 938 939 940 941 942 943 944 945 946 947 948	10E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E 150E	1	A	16.81 (427)	16.12 (410)	0.5 (13) Tripped Force 2 Lbs.	63,000
5.5 kV Max. – Clip-Lock Style – 21.25" (540mm) Clip Centers – 3" (76.2mm) Barrel Diameter								
A055C1DORO – 200E 250E 300E 400E A055C2DORO – 450E 500E 600E	225-007- 949 950 951 952 953 954 955	200E 250E 300E 400E 450E 500E 600E	1 2	A B	22.81 (580)	22.12 (562)	0.5(13) Tripped Force 2 Lbs.	63,000
15.5 kV Max. – Clip-Lock Style – 18.25" (464mm) Clip Centers – 3" (76.2mm) Barrel Diameter								
A155C1DORO – 10E 15E 20E 25E 30E 40E 50E	225-007- 967 968 969 970 971 972 973	10E 15E 20E 25E 30E 40E 50E	1	A	19.81 (504)	19.12 (486)	0.5(13) Tripped Force 2 Lbs.	50,000

* RMS ASYM. AMPERES = RMS SYM. AMPERES x 1.6

Amp-Trap® – E Rated

Medium Voltage Fuses

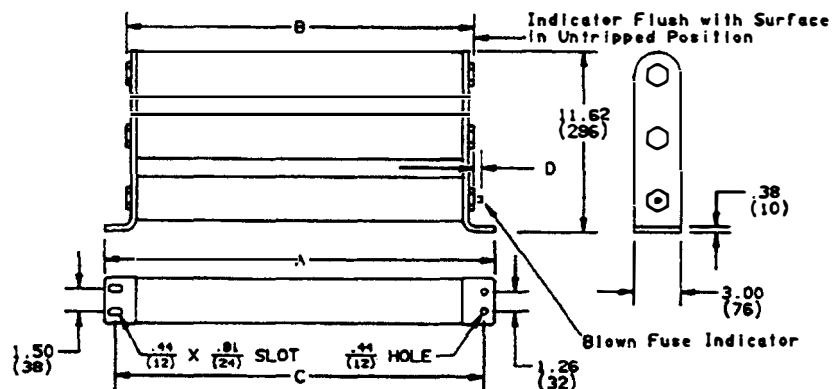
CL-14 and BOLT-IN SERIES

CL-14 Series — 15.5 kV Clip-Lock Mounted (cont'd)

NEW CATALOG NUMBER	OLD CATALOG NUMBER	AMPERE RATING	NUMBER OF BARRELS	FIG.	DIMENSIONS INCHES (mm)			INTERRUPTING RATING RMS SYM.* AMPERES
					A	B	C	
15.5 kV Max. – Clip Lock Style – 21.25" (540mm) Clip Centers – 3" (76.2mm) Barrel Diameter								
A155C1DORO-65E 80E 100E	225-007-974 975 976	65E 80E 100E	1	A	22.81 (580)	22.12 (562)	0.5 (13) Tripped Force 2 Lb.	50,000
A155C2DORO-125E	977	125E	2	B				
A155C3DORO-150E 200E 250E 300E	978 979 980 981	150E 200E 250E 300E	3	C				

*RMS ASYM. AMPERES = RMS SYM. AMPERES x 1.6

Bolt-In Series – 5.5kV



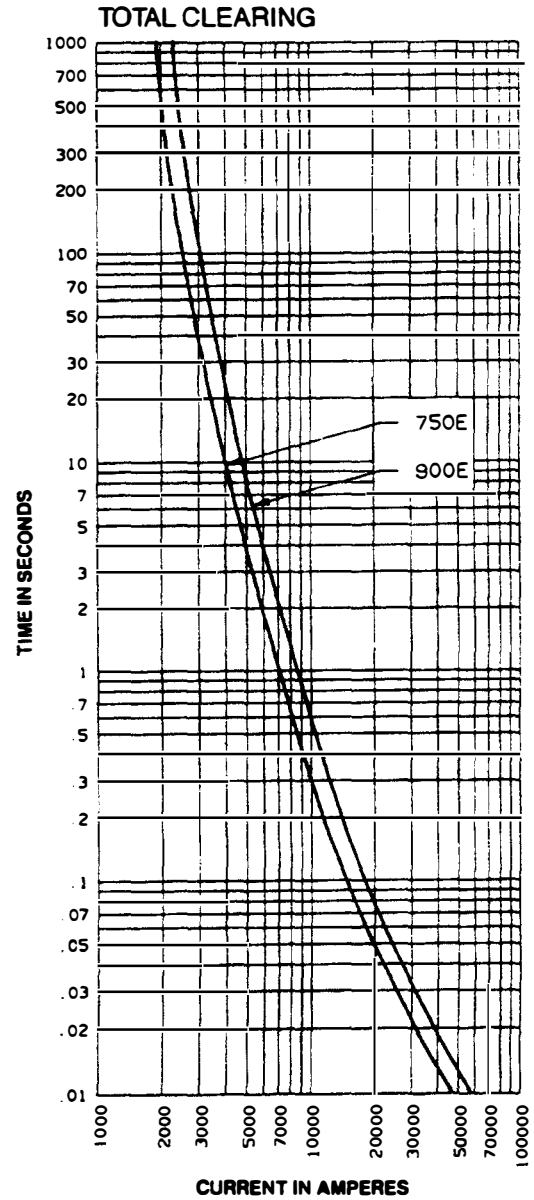
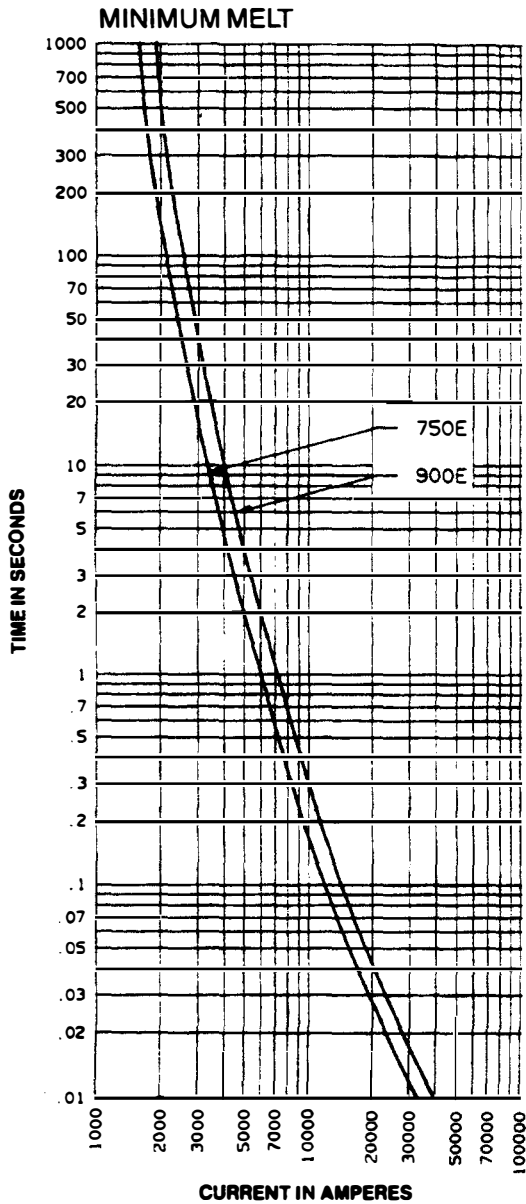
NEW CATALOG NUMBER	OLD CATALOG NUMBER	AMPERE RATING	NUMBER OF BARRELS	DIMENSIONS INCHES (mm)				INTERRUPTING RATING RMS SYM.* AMPERES
				A	B	C	D	
5.5 kV Max. – Bolt –In Style – 23.73" (603mm) Hole Centers – 3" (76.2mm) Barrel Diameter								
A055B3DORO-750E 900E	A550X 750E-4 900E-4	750E 900E	3	25.11 (638)	22.37 (569)	23.73 (603)	0.5(13) Tripped Force 2 Lb.	63,000

*RMS ASYM. AMPERES = RMS SYM. AMPERES x 1.6

Amp-trap[®]-E Rated Medium Voltage Fuses

CS-3 Series

Time — Current Data — 5.5kV Fuses
A055B3DORO — 750E & 900E

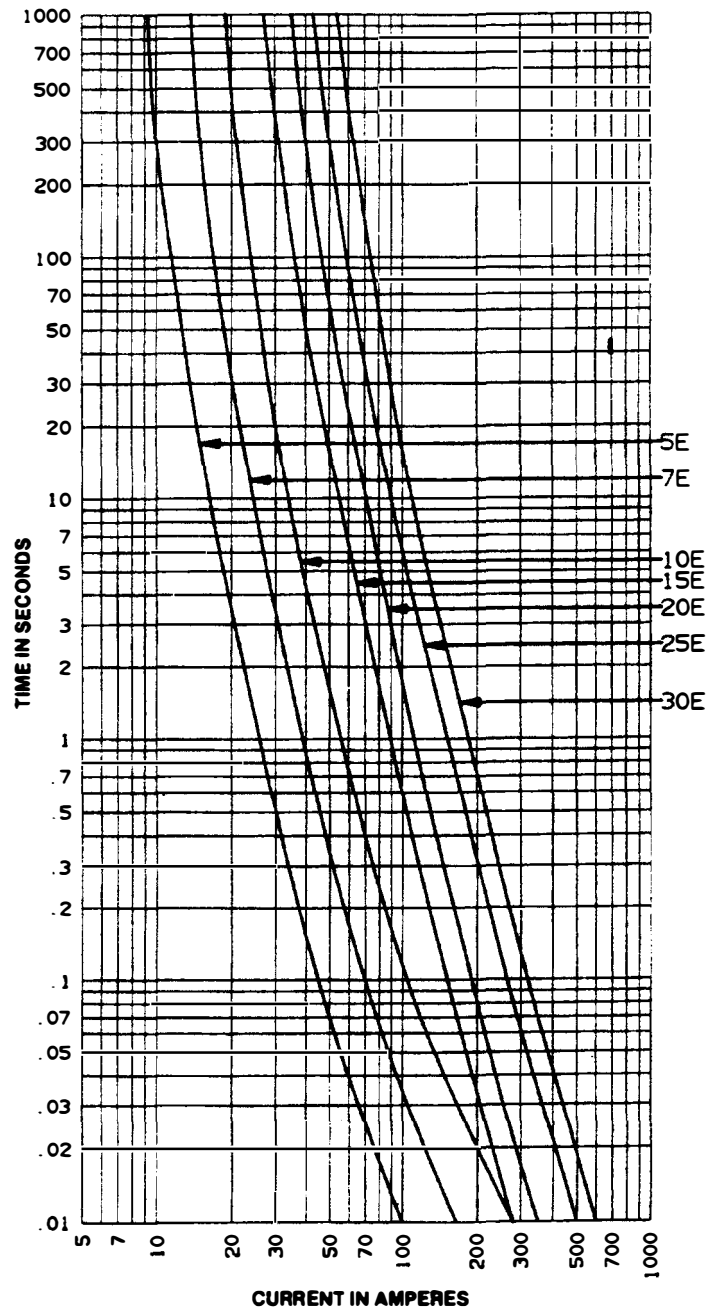


Amp-trap® — E Rated

Medium Voltage Fuses

CS-3 Series

Minimum Melting Time – Current Data – 15.5kV Fuses
A155F1CORO - 5E to 30E

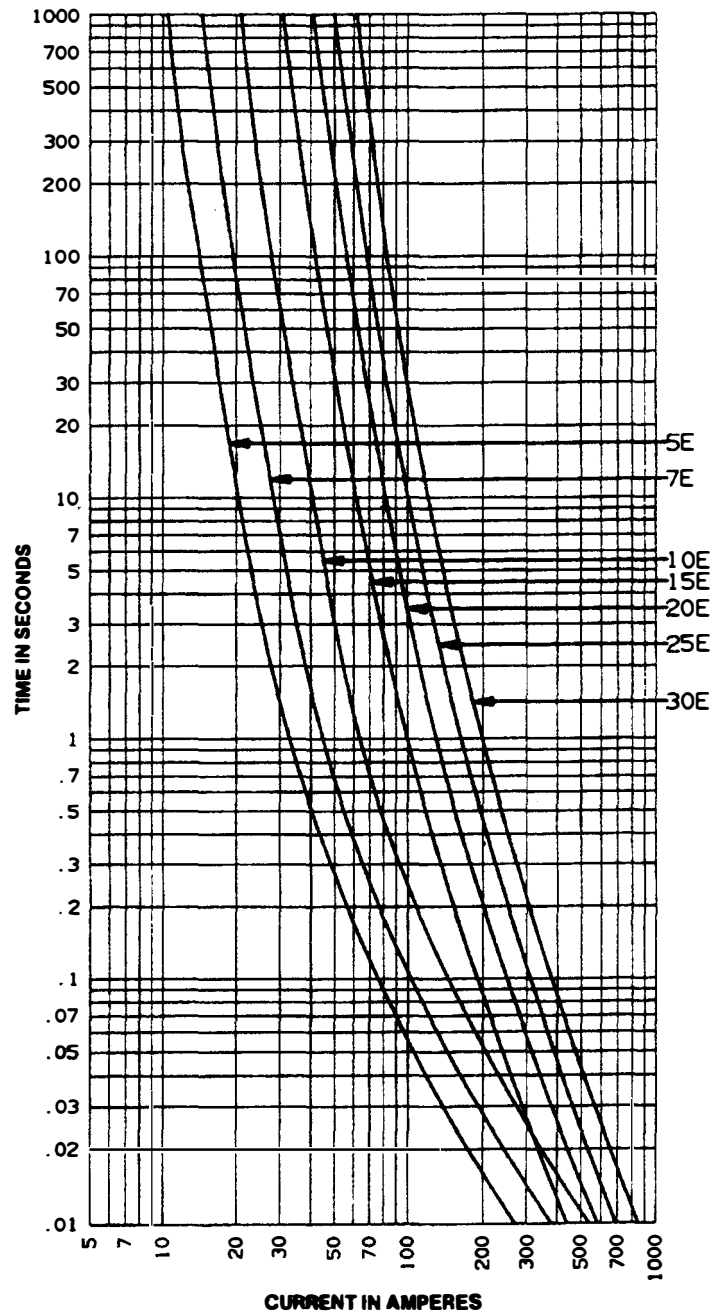


Amp-trap® — E Rated

Medium Voltage Fuses

CS-3 Series

Total Clearing Time – Current Data – 15.5kV Fuses
A155F1CORO - 5E to 30E



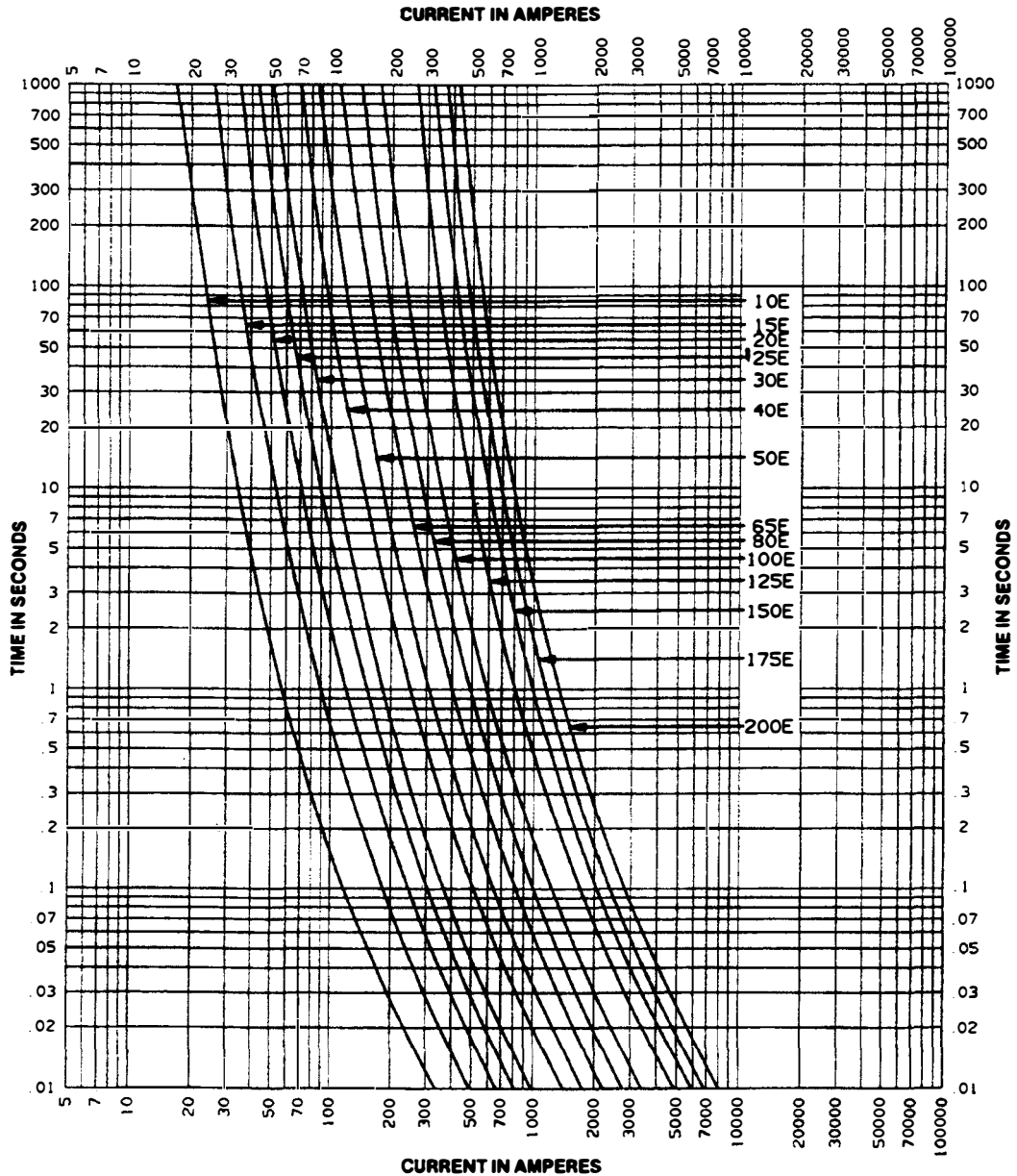
Amp-trap® — E Rated Medium Voltage Fuses

CS-3 Series

Minimum Melt Time – Current Data – 15.5kV Fuses

A155F1DORO - 10E to 100E

A155F2DORO - 65E to 200E



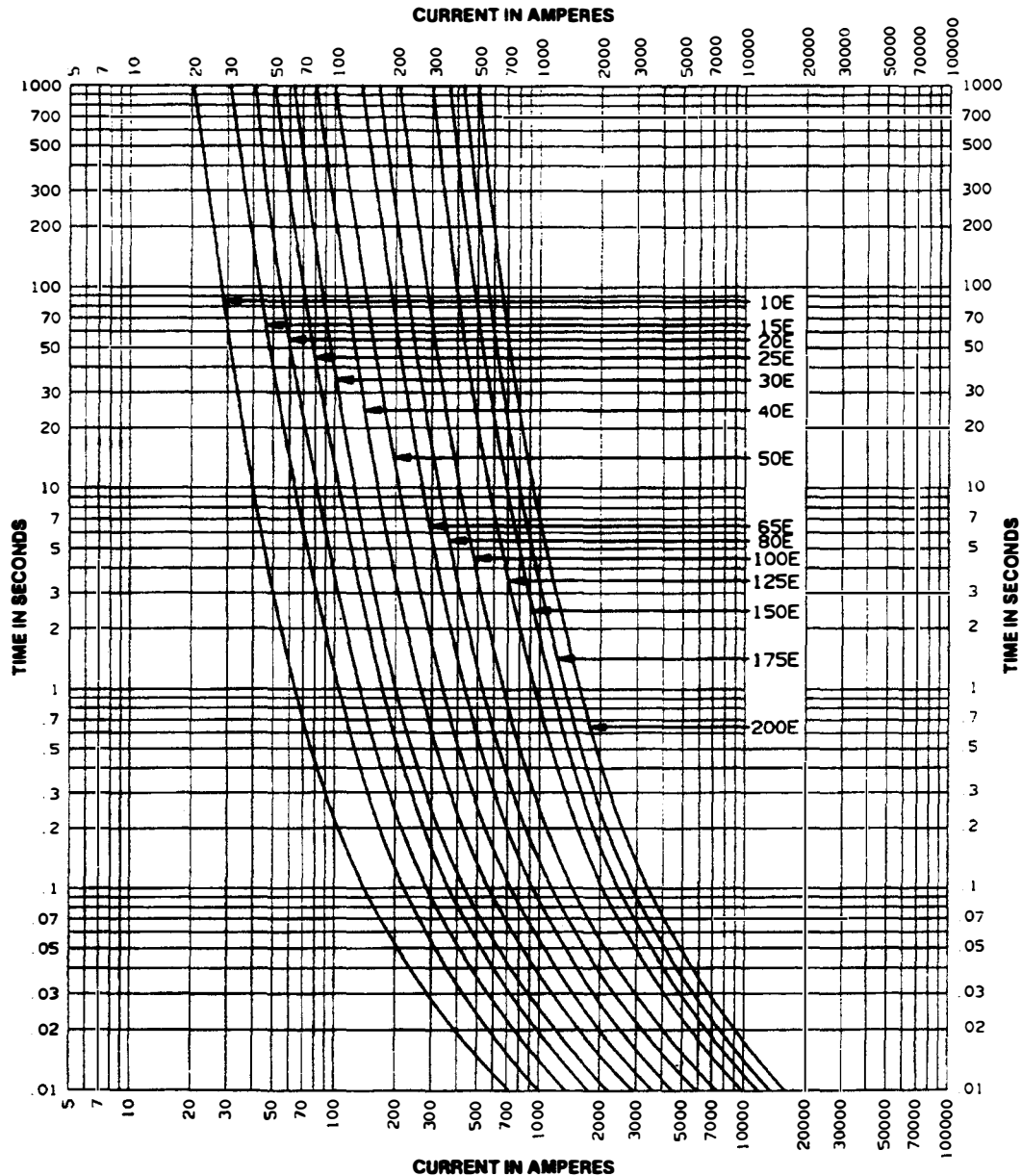
Amp-trap® — E Rated Medium Voltage Fuses

CS-3 Series

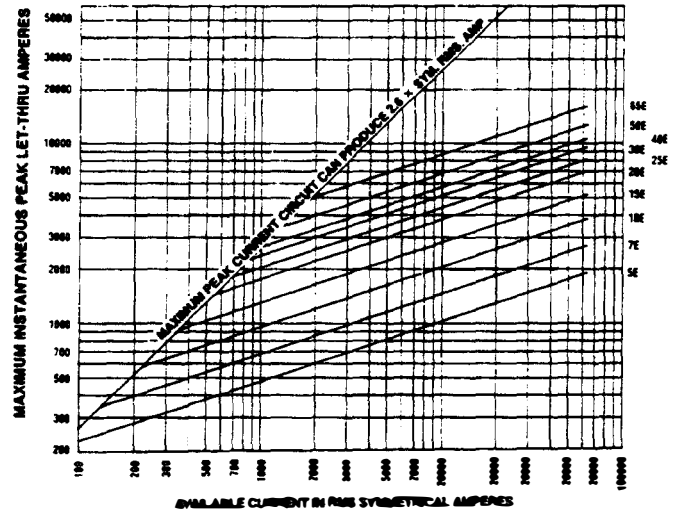
Total Clearing Time – Current Data – 15.5kV Fuses

A155F1DORO - 10E to 100E

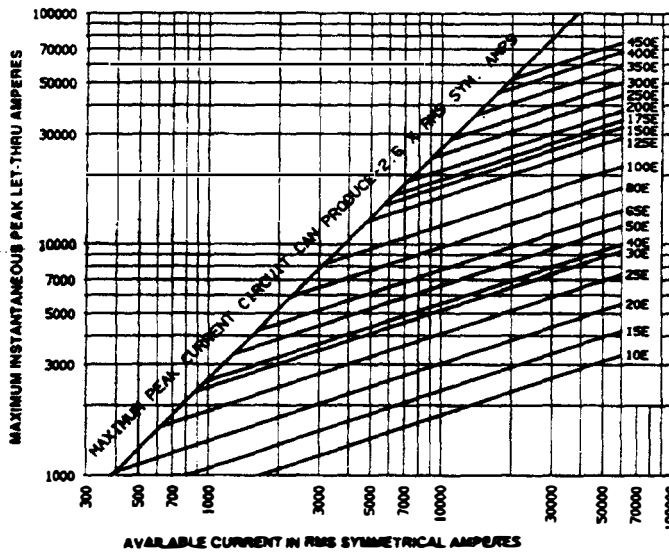
A155F2DORO - 65E to 200E



Amp-trap® — E Rated Medium Voltage Fuses CS-3 Series

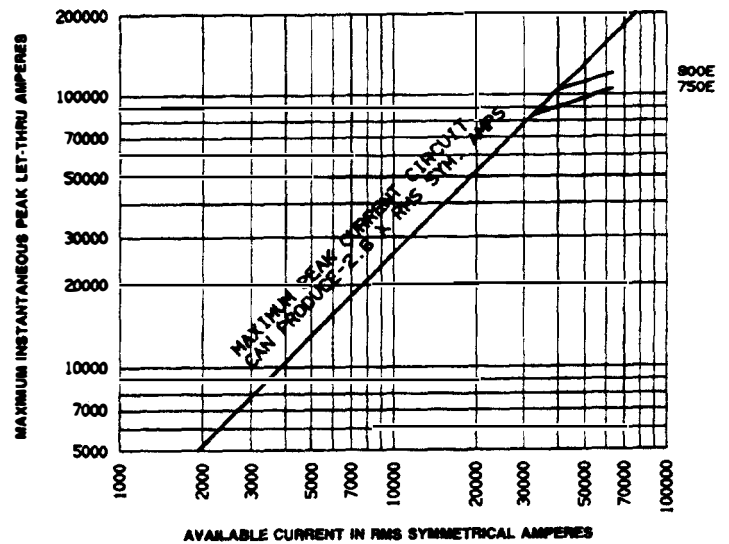


**Peak Let-Thru Current Data
5.5kV Fuses
A055F1CORO - 5E to 65E**

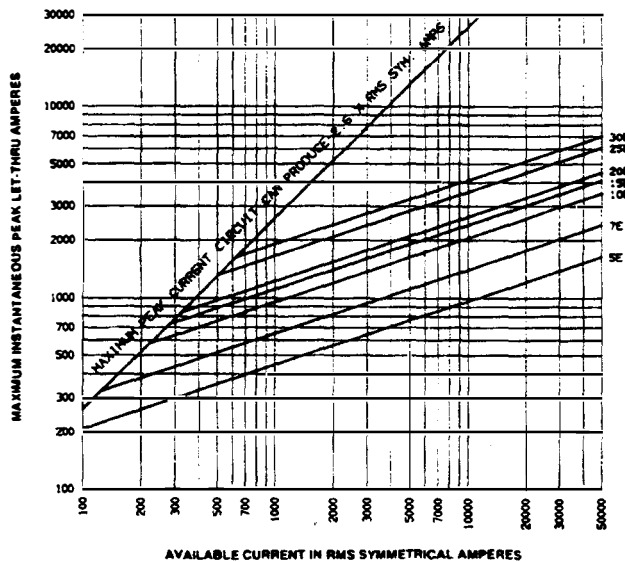


**Peak Let-Thru Current Data
5.5kV Fuses
A055F1DORO - 10E to 200E
A055F2DORO - 250E to 450E**

**Peak Let-Thru Current Data
5.5kV Fuses
A055B3DORO - 750E to 900E**

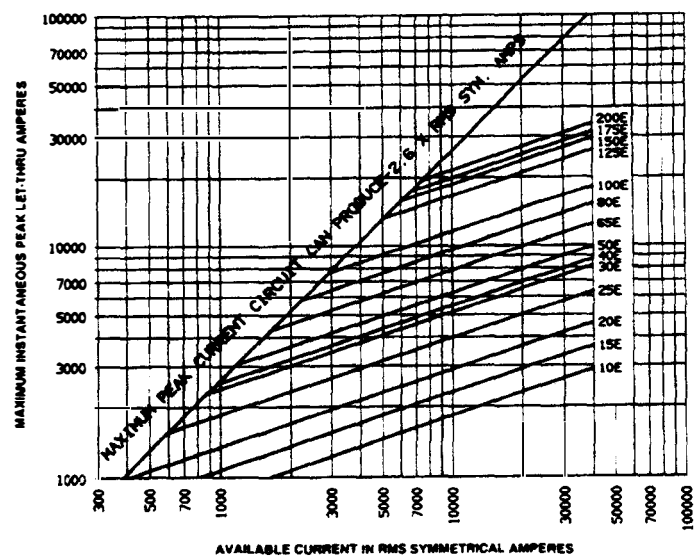


Amp-trap® — E Rated Medium Voltage Fuses CS-3 Series



**Peak Let-Thru Current Data
15.5kV Fuses
A155F1CORO - 5E to 30E**

**Peak Let-Thru Current Data
15.5kV Fuses
A155F1DORO - 10E to 100E
A155F2DORO - 65E to 200E**



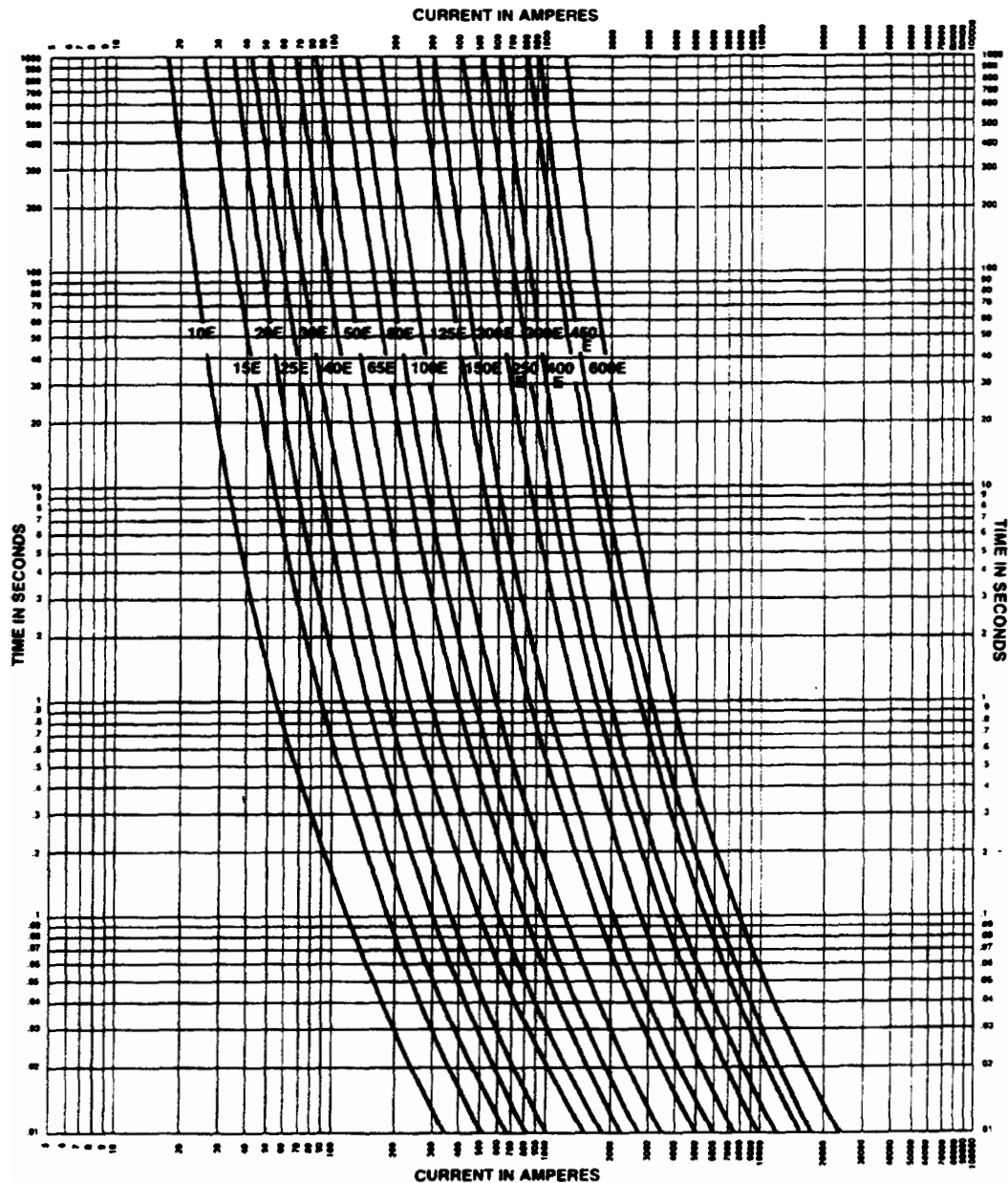
Amp-trap® — E Rated Medium Voltage Fuses

CL-14 Series

Minimum Melt Time – Current Data – 5.5kV Fuses

A055C1DORO - 10E thru 400E

A055C2DORO - 450E thru 600E



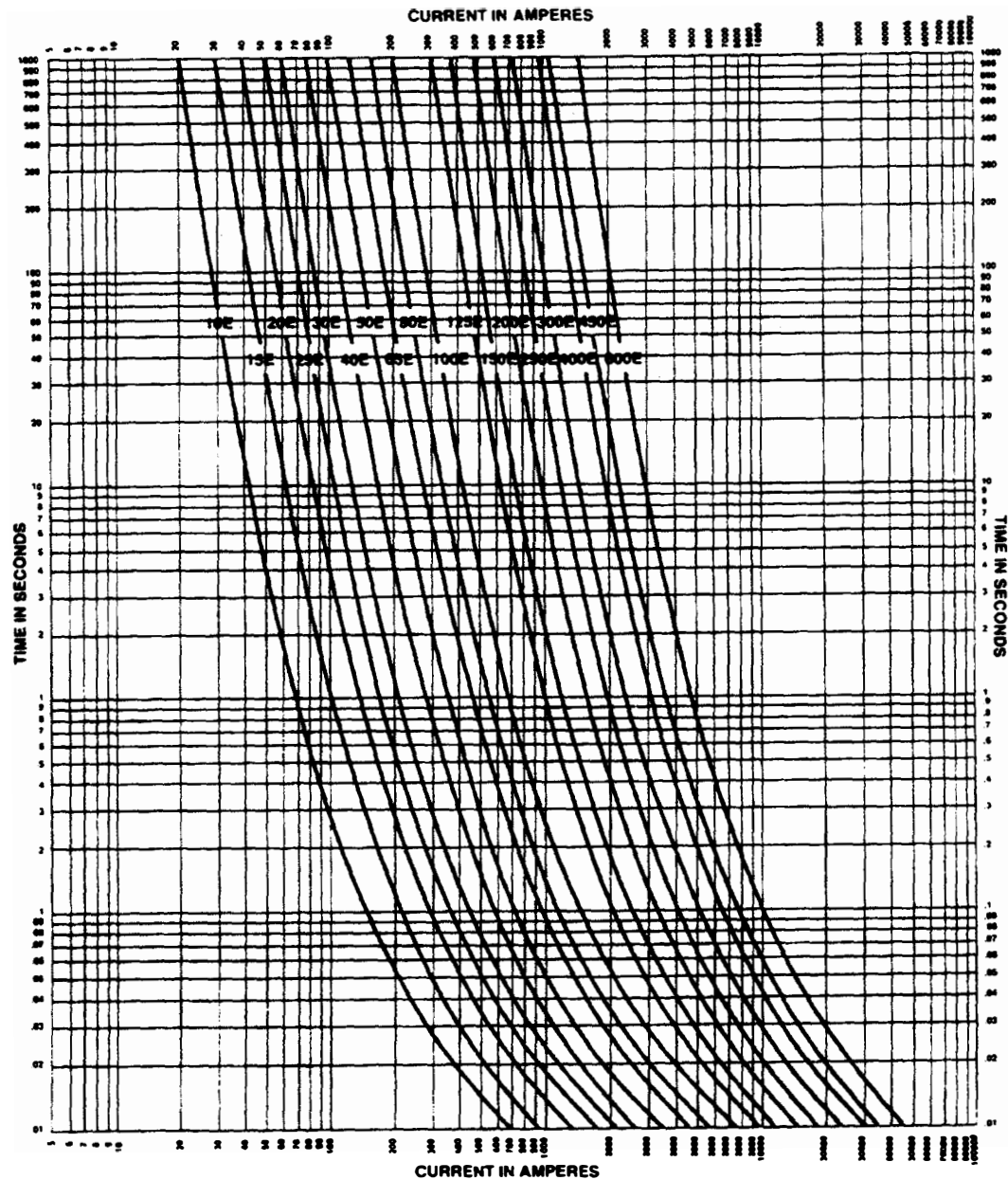
Amp-trap[®] — E Rated Medium Voltage Fuses

CL-14 Series

Total Clearing Time – Current Data – 5.5kV Fuses

A055C1DORO - 10E thru 400E

A055C1DORO - 450E thru 600E



Amp-trap® — E Rated Medium Voltage Fuses

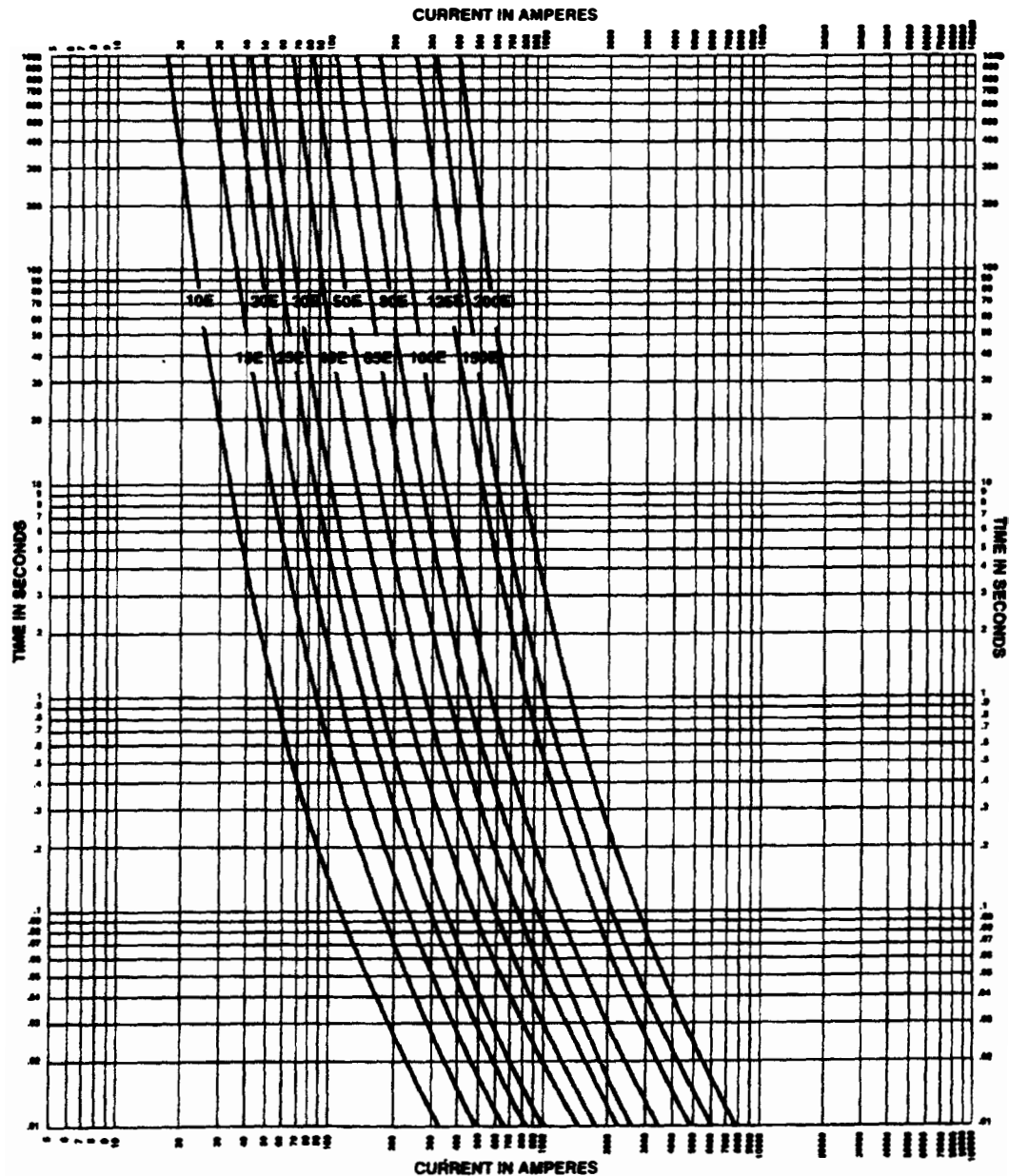
CL-14 Series

Minimum Melt Time – Current Data – 15.5kV Fuses

A155C1DORO - 10E thru 100E

A155C2DORO - 125E

A155C3DORO - 150E thru 200E



Amp-trap[®] — E Rated Medium Voltage Fuses

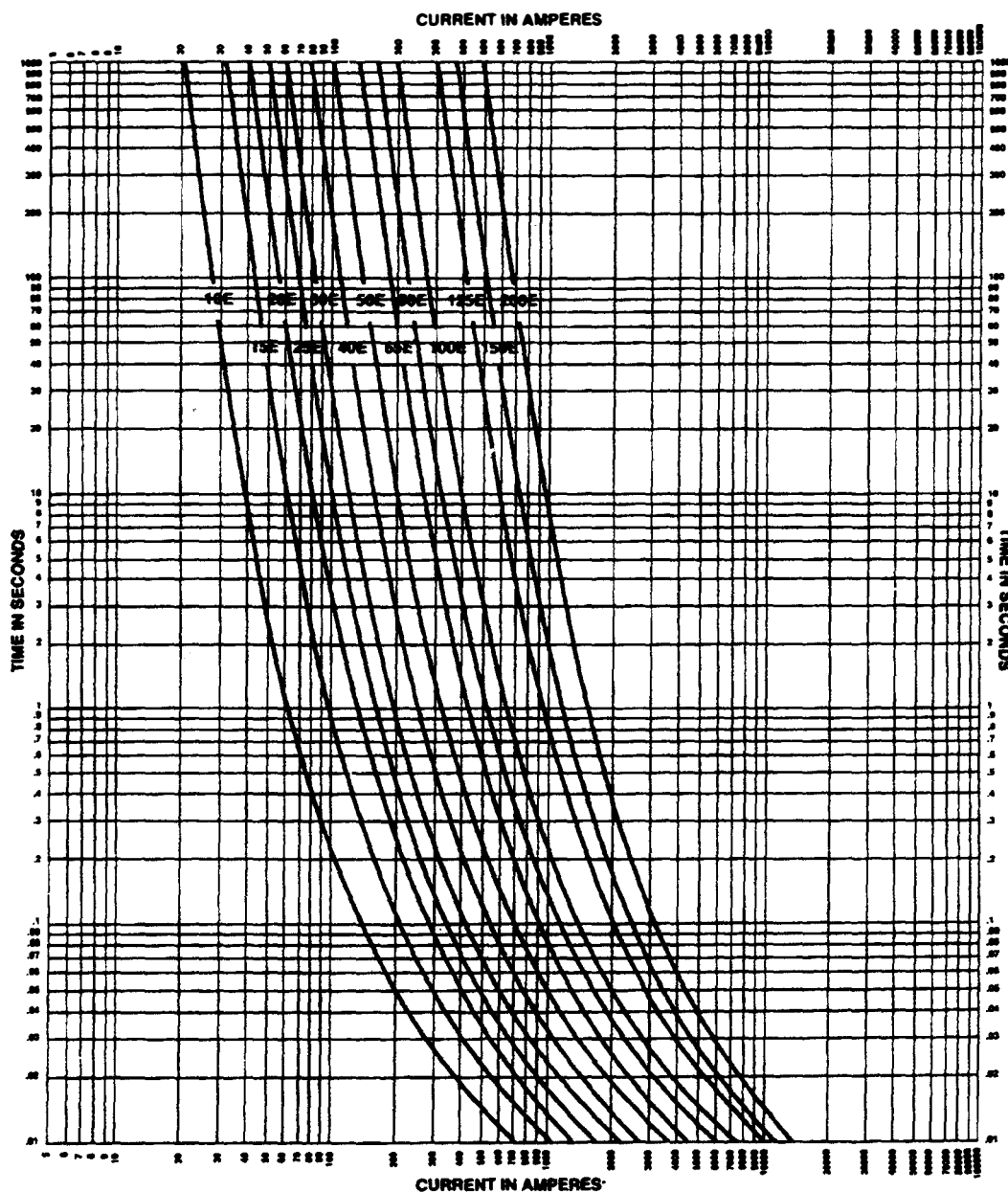
CL-14 Series

Total Clearing Time — Current Data — 15kV Fuses

A155C1DORO - 10E thru 100E

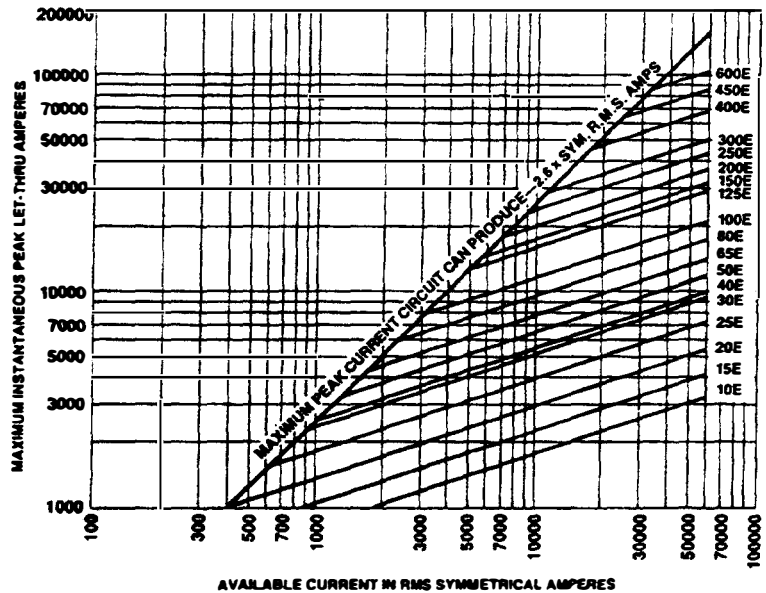
A155C2DORO - 125E

A155C3DORO - 150E thru 200E

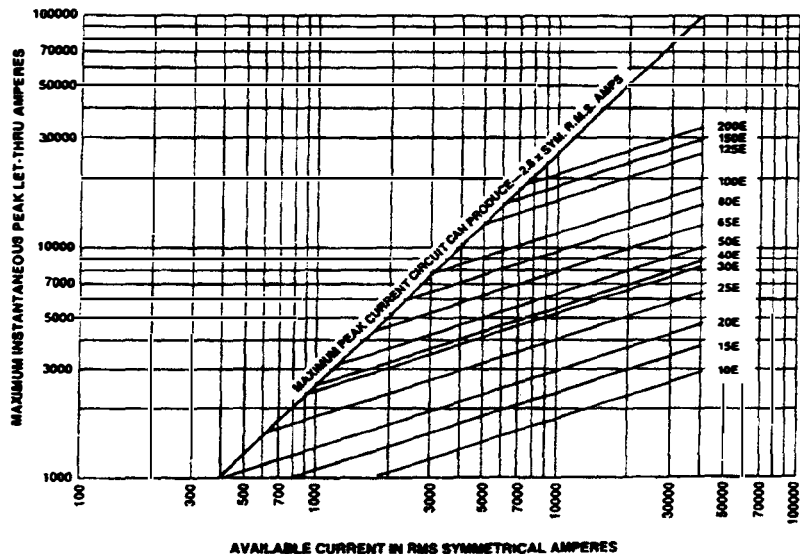


Amp-trap® — E Rated Medium Voltage Fuses CL-14 Series

Peak Let-Thru
Current Data
5.5kV Fuses
A055C1DORO - 10E thru 400E
A055C2DORO - 450E thru 600E



Peak Let-Thru
Current Data
15.5kV Fuses
A155C1DORO - 10E thru 100E
A155C2DORO - 125E
A155C3DORO - 150E thru 200E



Amp-trap

Potential Transformer Fuses

A240T/A480T/A500T/A720T

E Rated

Current Limiting

50kA RMS Sym. I.R.

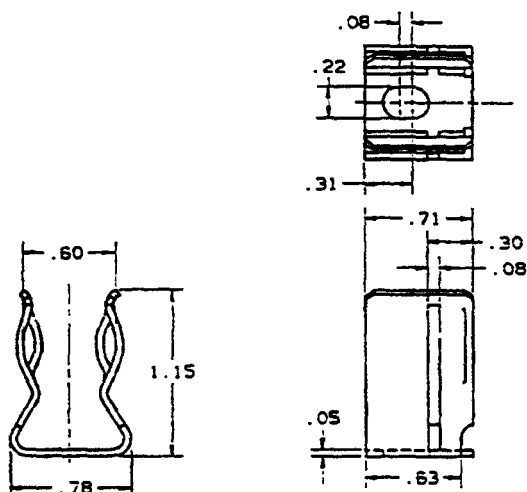
2400, 4800, 5000 and 7200 Volt Ratings

½ E to 5E Ratings

Small Physical Size



These high interrupting capacity current limiting fuses provide primary protection for potential transformers. They are E-Rated fuses, and will open in 5 minutes when subjected to currents of 2.0 to 2.4 times their E rating in amperes.

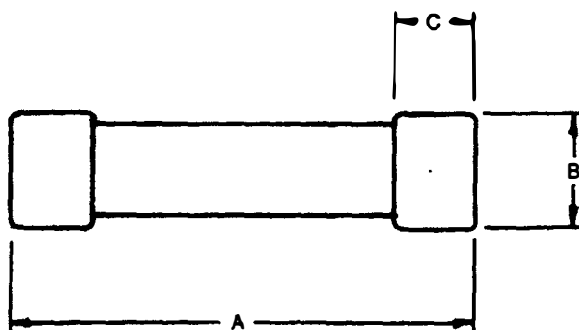


Mounting Clip No. CO8917P
For 1/16" Diameter PT Fuses
(2 required per fuse)

Standard Ratings, Catalog Numbers

E RATING	CATALOG NUMBER			
	2400V	4800V	5000V	7200V
½E	A240T½E	A480T½E	A500T½E-1	—
1E	A240T1E	A480T1E	A500T1E-1	A720T1E-1
2E	A240T2E	A480T2E	—	A720T2E-1
3E	—	A480T3E	A500T3E-1	—
4E	—	A480T4E	—	—
5E	A240T5E	A240T5E	A500T5E-1	—

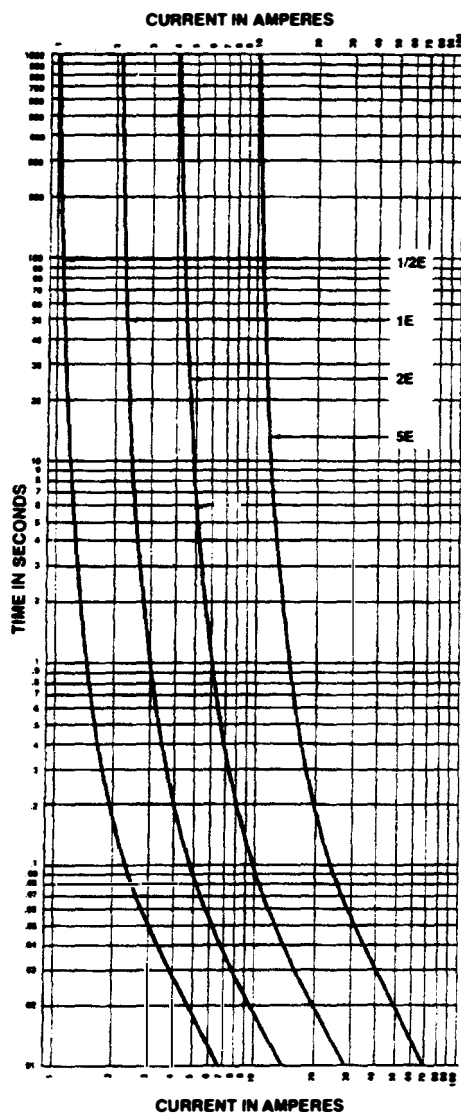
Dimensions



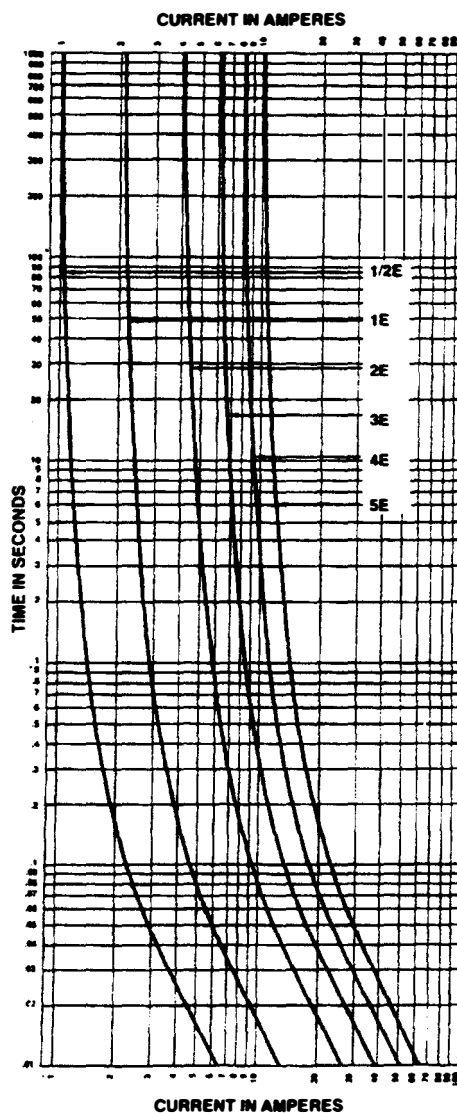
CAT. NO. PREFIX	DIMENSIONS—INCHES			CLIP CENTERS
	A	B	c	
A240T	4 5/8	1 3/16	5/8	4.0"
A480T	5 5/8	1 3/16	5/8	5.0"
A500T	5 5/8	1	5/8	5.0"
A720T	9 1/2	1 3/16	5/8	7.38"

Amp-trap[®]—E Rated Potential Transformer Fuses 2400V, 4800V

Melting Time—Current Data
2400V
A240T(½E to 5E)

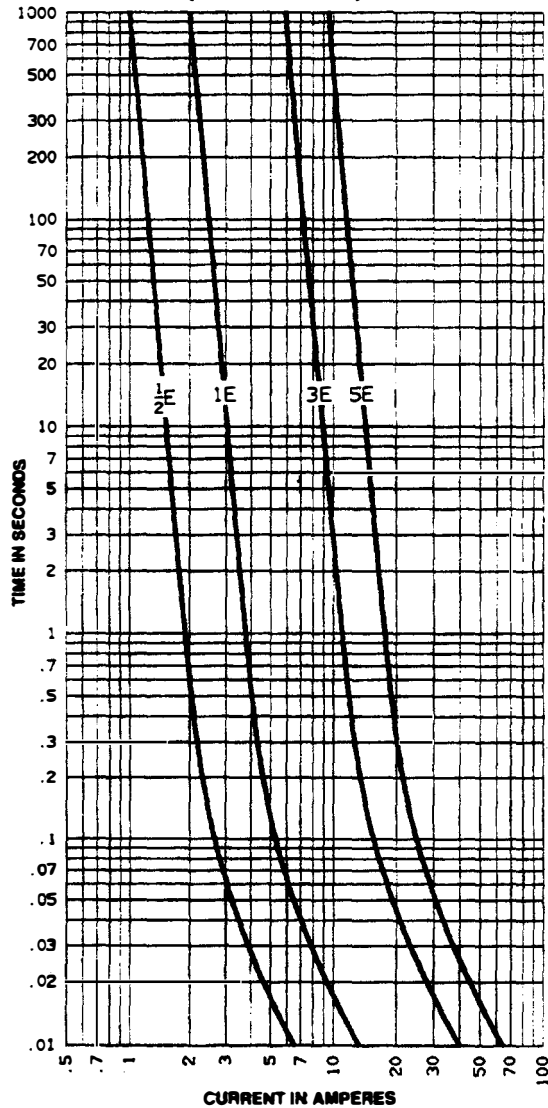


4800V
A480T(½E to 5E)



Amp-trap® — E Rated Potential Transformer Fuses 5000V, 7200V

Melting Time – Current Data
5000V
A500T (½ E to 5E) -1



7200V
A720T(1E, 2E)-1

