

# Transformer Protection

## Amp-Trap® CS-3 Series and 9F60/9F62 Series

### 2.75kV, 5.5kV, 8.25kV, 15.5kV, 25.8kV and 38kV Ferrule Mounted Fuses

Mersen fuses for the protection of transformers and distribution lines deliver overload and short circuit protection. These current-limiting fuses will melt at current that can be as low as 1.7 times the fuse current ratings up to its maximum interrupting rating. These fuses are designed to withstand the transformer magnetizing inrush current. They have 2 (size C), 3 (size D) and 4 (size E) inch diameter barrels with ferrules and are mounted in spring reinforced clips.

#### Features/Benefits:

- Amp-Trap CS-3 and 9F62 series are UL listed for compatibility with UL listed equipment.
- Ferrule mounting for standard clips and interchangeability with other brands of fuses.
- Current-limiting for superior equipment protection.
- Non-venting for silent operation
- Metal embossed catalog number and manufacturing date for lasting identification.
- Outdoor usage for the 9F62 and 9F60 type EJO.
- Blown-fuse indicator to give positive identification of open fuse:
  - Amp-Trap: 2" Barrel 1 lb tripped force - 0.19 Inch
  - Amp-Trap: 3" Barrel 2 lb tripped force - 0.50 Inch
  - 9F60/9F62: 0.125 lb tripped force – 0.20 Inch
- Accessories - see page E53

#### Highlights:

- E-Rated
- UL listed
- Outdoor use



#### Applications:

- Protection for 2.4kV to 34.5kV transformers or distribution systems.

#### Definitions:

##### General Purpose Current-Limiting Fuses (Per IEEE Std C37.40-2003):

A general purpose current-limiting fuse is one that is capable of interrupting all currents from its rated interrupting current down to the current that causes melting of the fusible element(s) in one hour or more.

**E-Rating:** E-Rated fuses are general purpose fuses that operate as follow (Per ANSI C37.46-2000):

- 100E or less – must melt in 300 seconds (5 mins.) at 200 to 240% of E (ampere) rating.
- Over 100E – must melt in 600 seconds (10 mins.) at 220 to 264% of E (ampere) rating.
- Example: A 100E fuse must melt in 300 seconds with an applied current of 200 to 240 amperes.

##### Power Distribution Fuses:

Defines fuses designed prior to the time where the ANSI standards defined the term "General Purpose" and do not meet all of the general purpose definition. These fuses are capable of interrupting all currents above 2.2 to 3 times the fuse's rated current up to its maximum interrupting rating.



#### Ratings

- See page E3 for listing

#### Approvals:

- UL listed to standard File E143362



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## Amp-Trap<sup>®</sup> CS-3 Series and 9F60/9F62 Series

### Ferrule Mounted Fuses

**Amp-Trap CS-3 Series:** (Indoors or outdoors in a weatherproof enclosure)

A055F: 5.5kV – AC: 5E to 450E – 63kA I.R. Sym

A825X: 8.25kV – AC: 10E to 200E – 50kA I.R. Sym

A155F: 15.5kV – AC: 5E to 200E – 50 kA I.R. Sym

**9F62 Series Type EJO-1:** (Indoors and outdoors)

9F62: 5.5kV – AC: 25A to 450A – 50kA IR Sym

9F62: 8.3kV – AC: 20A to 250A – 50 kA IR Sym

9F62: 15.5kV – AC: 20A to 200A – 50 kA IR Sym



**9F60 Series Type EJO-1:** (Indoors and outdoors)

9F60: 2.75kV – AC: 1E to 200E – 50kA IR Sym

9F60: 5.5kV – AC: 0.5E to 200E – 50kA IR Sym

9F60: 8.25kV – AC: 0.5E to 200E – 50kA IR Sym

9F60: 15.5kV – AC: 0.5E to 100E – 50kA IR Sym

9F60: 25.8kV – AC: 0.5E to 100E – 25kA to 35kA IR Sym

9F60: 38kV – AC: 1E to 80E – 13kA to 26kA IR Sym



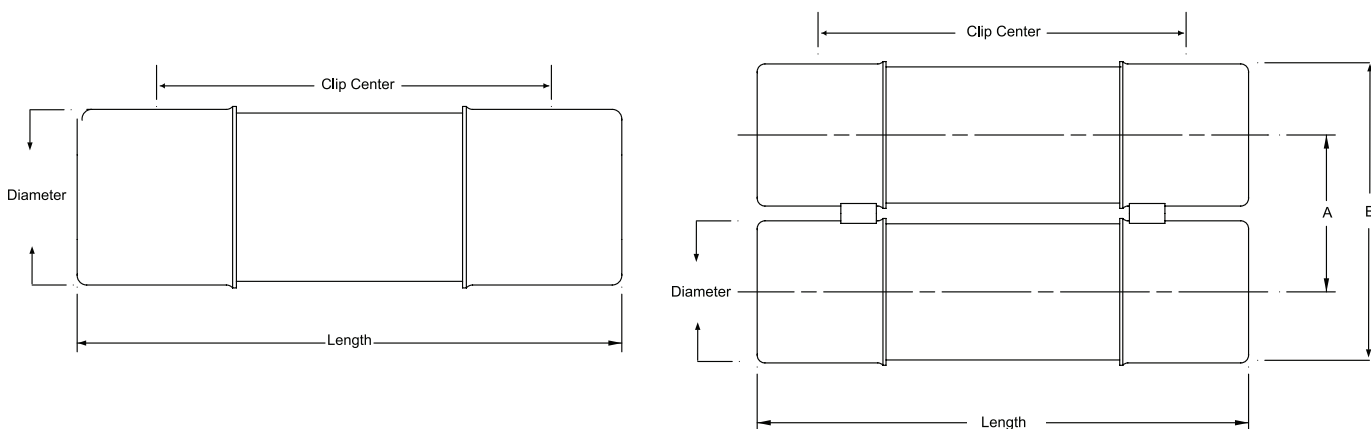
**9F60 Series Type EJ-1:** (Indoors or outdoors in a weatherproof enclosure)

9F60: 2.75kV – AC: 1E to 200E – 47kA to 52kA IR Sym

9F60: 5.5kV – AC: 0.5E to 25E – 63kA IR Sym

9F60: 15.5kV – AC: 2E to 175E – 31kA to 50kA IR Sym

9F60: 25.8kV – AC: 0.5E to 2E – 35kA IR Sym



9F series      A = 3.31 inches (84mm)

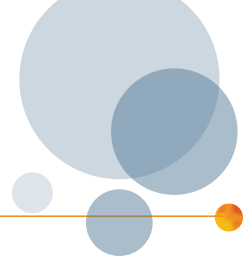
9F series      B = 6.16 inches (160mm)

Amp-Trap series A = 3.63 inches (92 mm)

Amp-Trap series B = 6.63 inches (169 mm)

# Transformer Protection

## Amp-Trap® CS-3 Series and 9F60/9F62 Series



### 2.75kV Ferrule mounted fuses:

#### 2.75kV Power Distribution fuses – 9F60 series, E-Rated EJ-1

7" (178 mm) Clip Centers - Suitable for use indoors or in an enclosure only

Catalog No.	Amp Rating	No. of Barrels	Indicating	Diameter Inches (mm)	Length Inches (mm)	Max Voltage	Max IR RMS Sym	Fuse Support Indoor (EK-1)	Fuse Support Outdoor (EK0-1)	Fuse Disconnect Indoor (EK-3)	Fuse Disconnect Outdoor (EK0-3)
9F60CCB001	1E	1	Yes	2 (50.8)	9.18 (233)	2.75 kV	47kA	9F61AAB201	N/A	9F61AAB205	N/A
9F60CCB002	2E										
9F60CCB003	3E										
9F60CCB005	5E										
9F60CCB007	7E										
9F60CCB010	10E										
9F60CCB015	15E										
9F60CCB020	20E	1	Yes	2 (50.8)	9.18 (233)	2.75 kV	52kA	9F61AAB201	N/A	9F61AAB205	N/A
9F60CCB025	25E										
9F60ECB030	30E	1	Yes	3 (76.2)	10.88 (276)	2.75 kV	52kA	9F61AAB301	N/A	9F61AAB305	N/A
9F60ECB040	40E										
9F60ECB050	50E										
9F60ECB065	65E										
9F60ECB080	80E										
9F60ECB100	100E										
9F60GCB125	125E										
9F60GCB150	150E	2	Yes	3 (76.2)	10.88 (276)	2.75 kV	52kA	9F61AAB401	N/A	9F61AAB405	N/A
9F60GCB200	200E										

#### 2.75kV Power Distribution fuses – 9F60 series, E-Rated EJ-1

9" (229 mm) Clip Centers - Suitable for use indoors or in an enclosure only

Catalog No.	Amp Rating	No. of Barrels	Indicating	Diameter Inches (mm)	Length Inches (mm)	Max Voltage	Max IR RMS Sym	Fuse Support Indoor (EK-1)	Fuse Support Outdoor (EK0-1)	Fuse Disconnect Indoor (EK-3)	Fuse Disconnect Outdoor (EK0-3)
9F60CEB001	1E	1	Yes	2 (50.8)	11.18 (284)	2.75 kV	52kA	9F61ACB201	N/A	9F61ACB205	N/A
9F60CEB002	2E										
9F60CEB003	3E										
9F60CEB005	5E										
9F60CEB007	7E										
9F60CEB010	10E										
9F60CEB015	15E										
9F60CEB020	20E										
9F60CEB025	25E										

#### 2.75kV Power Distribution fuses – 9F60 Series, E-Rated EJO-1

12" (305 mm) Clip Centers - Suitable for use indoors or outdoors



Catalog No	Amp Rating	No. of Barrels	Indicating	Diameter Inches (mm)	Length Inches (mm)	Max Voltage	Max IR RMS Sym	Fuse Support Indoor (EK-1)	Fuse Support Outdoor (EK0-1)	Fuse Disconnect Indoor (EK-3)	Fuse Disconnect Outdoor (EK0-3)
9F60DJB001	1E	1	Yes	2 (50.8)	14.18 (360)	2.75 kV	50kA	9F61AEG201	9F61CEF209	9F61AEG205	9F61CEF210
9F60DJB002	2E										
9F60DJB003	3E										
9F60DJB005	5E										
9F60DJB007	7E										
9F60DJB010	10E										
9F60DJB015	15E										
9F60DJB020	20E										
9F60DJB025	25E										
9F60FJB030	30E	1	Yes	3 (76.2)	15.88 (403)	2.75 kV	50kA	9F61AEB301	9F61CEF309	9F61AEB305	9F61CEF310
9F60FJB040	40E										
9F60FJB050	50E										
9F60FJB065	65E										
9F60FJB080	80E										
9F60FJB100	100E										
9F60HJB125	125E										
9F60HJB150	150E	2	Yes	3 (76.2)	15.88 (403)	2.75 kV	50kA	9F61AEB401	9F61CEF409	9F61AEB405	9F61CEF410
9F60HJB200	200E										