

# 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® 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



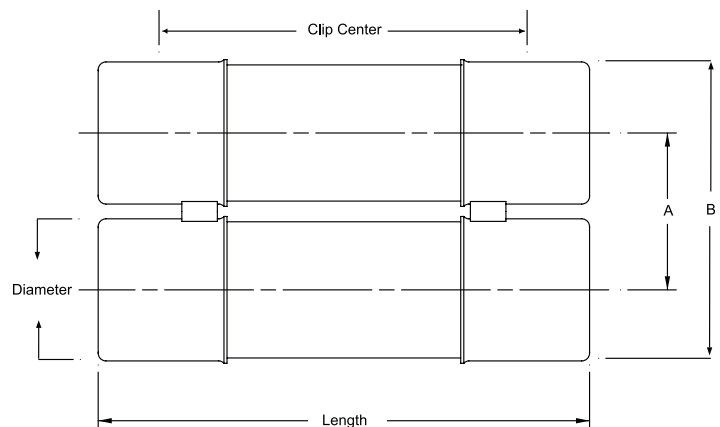
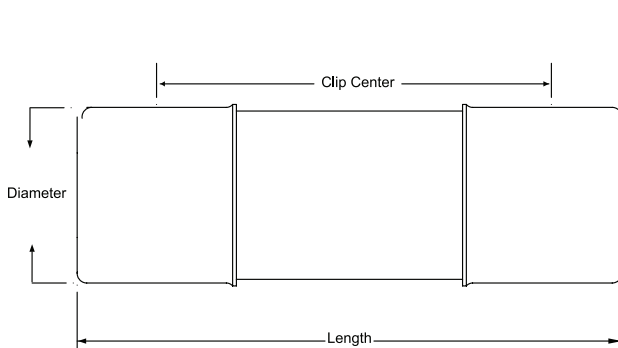
**9F60 Series Type EJ-1:** (Indoors or outdoors in a weatherproof enclosure)

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)

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

### 25.8kV Ferrule mounted fuses:

#### 25.8kV Power Distribution fuses – 9F60 Series, E-Rated EJ-1

15" (381 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 )
9F60CMJ905	0.5E	1	Yes	2 (50.8)	17.20 (437)	25.8 kV	35kA*	–	N/A	–	N/A
9F60CMJ001	1E										
9F60CMJ002	2E										

\* These fuses were designed and originally tested at a higher maximum interrupting rating value. Consult factory for further information.

#### 25.8kV Power Distribution fuses – 9F60 Series, E-Rated EJO-1

21" (533 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 )
9F60DNJ905	0.5E	1	Yes	2 (50.8)	23.18 (589)	25.8 kV	35kA*	9F61AHM201	9F61CHM209	9F61AHM205	9F61CHM210
9F60DNJ001	1E										
9F60DNJ002	2E										
9F60DNJ003	3E										
9F60DNJ005	5E										
9F60DNJ007	7E										
9F60DNJ010	10E										
9F60FNJ015	15E	1	Yes	3 (76.2)	24.81 (630)	25.8 kV	25kA	9F61AHM301	9F61CHM309	9F61AHM305	9F61CHM310
9F60FNJ020	20E										
9F60FNJ025	25E										
9F60FNJ030	30E										
9F60FNJ040	40E										
9F60FNJ050	50E										
9F60HNJ065	65E	2	Yes	3 (76.2)	24.81 (630)	25.8 kV	25kA	9F61AHM401	9F61CHM409	9F61AHM405	9F61CHM410
9F60HNJ080	80E										
9F60HNJ100	100E										