

# 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



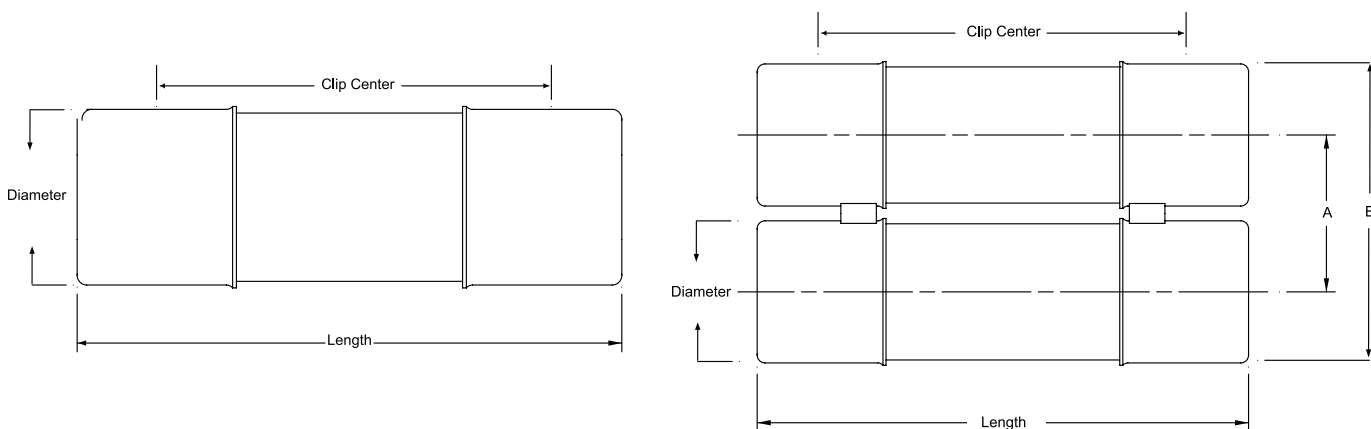
**9F60 Series Type EJ-1:** (Indoors or outdoors in a weatherproof enclosure)

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

### 5.5kV Ferrule mounted fuses:

#### 5.5kV 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 )
9F60CED905	0.5E	1	Yes	2 (50.8)	11.18 (284)	5.5 kV	63kA	9F61ACB201	N/A	9F61ACB205	N/A
9F60CED001	1E										
9F60CED002	2E										
9F60CED003	3E										
9F60CED005	5E										
9F60CED007	7E										
9F60CED010	10E										
9F60CED015	15E										
9F60CED020	20E										
9F60CED025	25E										

#### 5.5kV E-Rated Amp-Trap CS-3 Series – UL Listed

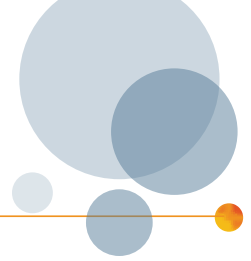
12" (305 mm) Clip Centers - Suitable for use indoors or in an enclosure only



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 )
A055F1C0R0-5E	5E	1	Yes	2 (50.8)	14.18 (360)	5.5kV	63kA	9F61AEG201	N/A	9F61AEG205	N/A
A055F1C0R0-7E	7E										
A055F1C0R0-10E	10E										
A055F1C0R0-15E	15E										
A055F1C0R0-20E	20E										
A055F1C0R0-25E	25E										
A055F1C0R0-30E	30E										
A055F1C0R0-40E	40E										
A055F1C0R0-50E	50E										
A055F1C0R0-65E	65E										
A055F1D0R0-10E	10E	1	Yes	3 (76.2)	15.88 (403)	5.5kV	63kA	9F61AEB301	N/A	9F61AEB305	N/A
A055F1D0R0-15E	15E										
A055F1D0R0-20E	20E										
A055F1D0R0-25E	25E										
A055F1D0R0-30E	30E										
A055F1D0R0-40E	40E										
A055F1D0R0-50E	50E										
A055F1D0R0-65E	65E										
A055F1D0R0-80E	80E										
A055F1D0R0-100E	100E										
A055F1D0R0-125E	125E	2	Yes	3 (76.2)	15.88 (403)	5.5kV	63kA	-	N/A	-	N/A
A055F1D0R0-150E	150E										
A055F1D0R0-175E	175E										
A055F1D0R0-200E	200E										
A055F2D0R0-250E	250E										
A055F2D0R0-300E	300E										
A055F2D0R0-350E	350E										
A055F2D0R0-400E	400E										
A055F2D0R0-450E	450E										

# Transformer Protection

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



### 5.5.kV General Purpose fuses – 9F62 Series, EJO-1 – UL Listed

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)
9F62HCB025	25A	1	Yes	2 (50.8)	14.18 (360)	5.5 kV	50kA	9F61AEG201	9F61CEF209	9F61AEG205	9F61CEF210
9F62HCB030	30A										
9F62HCB040	40A										
9F62HCB050	50A										
9F62HCB065	65A										
9F62DCB080	80A										
9F62DCB100	100A	1	Yes	3 (76.2)	15.88 (403)	5.5 kV	50kA	9F61AEB301	9F61CEF309	9F61AEB305	9F61CEF310
9F62DCB125	125A										
9F62DCB150	150A										
9F62DCB175	175A										
9F62DCB200	200A										
9F62FCB250	250A										
9F62FCB300	300A	2	Yes	3 (76.2)	15.88 (403)	5.5 kV	50kA	9F61AEB401	9F61CEF409	9F61AEB405	9F61CEF410
9F62FCB350	350A										
9F62FCB400	400A										
9F62FCB450	450A										

### 5.5kV 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)
9F60DJD005	0.5E	1	Yes	2 (50.8)	14.18 (360)	5.5 kV	50kA	9F61AEG201	9F61CEF209	9F61AEG205	9F61CEF210
9F60DJD001	1E										
9F60DJD002	2E										
9F60DJD003	3E										
9F60DJD005	5E										
9F60DJD007	7E										
9F60DJD010	10E										
9F60DJD015	15E										
9F60DJD020	20E										
9F60DJD025	25E										
9F60FJD030	30E	1	Yes	3 (76.2)	15.88 (403)	5.5 kV	50kA	9F61AEB301	9F61CEF309	9F61AEB305	9F61CEF310
9F60FJD040	40E										
9F60FJD050	50E										
9F60FJD065	65E										
9F60FJD080	80E										
9F60FJD100	100E										
9F60HJD125	125E	2	Yes	3 (76.2)	15.88 (403)	5.5 kV	50kA	9F61AEB401	9F61CEF409	9F61AEB405	9F61CEF410
9F60HJD150	150E										
9F60HJD200	200E										