

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



Transformer Protection

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

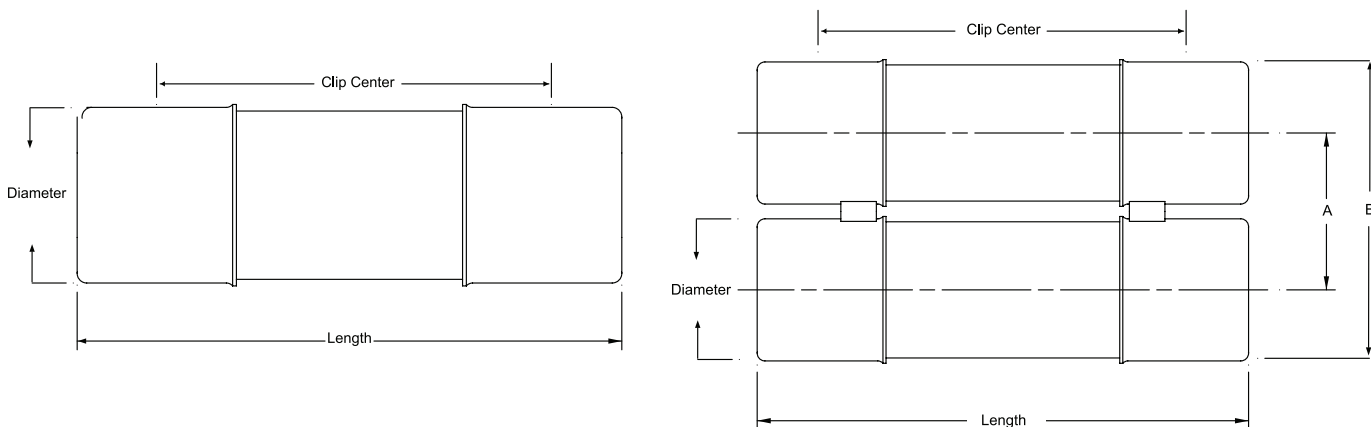
9F60 Series Type EJ-1: (Indoors or outdoors in a weatherproof enclosure)

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)

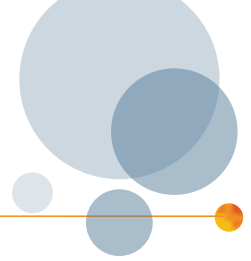
9F series B = 6.16 inches (160mm)

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

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

Transformer Protection

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



15kV / 15.5kV Ferrule mounted fuses:

15.5kV Power Distribution fuses – 9F60 Series, E-Rated EJ-1 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) |
|-------------|------------|----------------|------------|----------------------|--------------------|-------------|----------------|----------------------------|------------------------------|-------------------------------|---------------------------------|
| 9F60CJH002 | 2E | 1 | Yes | 2 (50.8) | 14.18 (360) | 15.5 kV | 50kA* | 9F61AEG201 | N/A | 9F61AEG205 | N/A |
| 9F60CJH003 | 3E | | | | | | | | | | |
| 9F60CJH005 | 5E | | | | | | | | | | |
| 9F60CJH007 | 7E | | | | | | | | | | |
| 9F60CJH010 | 10E | | | | | | | | | | |

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

15.5kV Power Distribution fuses – 9F60 Series, E-Rated EJO-1 15" (381 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) |
|-------------|------------|----------------|------------|----------------------|--------------------|-------------|----------------|---|------------------------------|---|---------------------------------|
| 9F60DMH005 | 0.5E | 1 | Yes | 2 (50.8) | 17.2 (437) | 15.5 kV | 50kA* | 9F61AGG201 (13.8kV nominal - 95kV BIL) 9F61AGJ201 (14.4kV nominal - 110kV BIL) | 9F61CGL209 | 9F61AGG205 (13.8kV nominal - 95kV BIL) 9F61AGJ205 (14.4kV nominal - 110kV BIL) | 9F61CGL210 |
| 9F60DMH001 | 1E | | | | | | | | | | |
| 9F60DMH002 | 2E | | | | | | | | | | |
| 9F60DMH003 | 3E | | | | | | | | | | |
| 9F60DMH005 | 5E | | | | | | | | | | |
| 9F60DMH007 | 7E | | | | | | | | | | |
| 9F60DMH010 | 10E | | | | | | | | | | |
| 9F60FMH015 | 15E | 1 | Yes | 3 (76.2) | 18.88 (480) | 15.5 kV | 50kA | 9F61AGG301 (13.8kV nominal - 95kV BIL) 9F61AGJ301 (14.4kV nominal - 110kV BIL) | 9F61CGL309 | 9F61AGG305 (13.8kV nominal - 95kV BIL) 9F61AGJ305 (14.4kV nominal - 110kV BIL) | 9F61CGL310 |
| 9F60FMH020 | 20E | | | | | | | | | | |
| 9F60FMH025 | 25E | | | | | | | | | | |
| 9F60FMH030 | 30E | | | | | | | | | | |
| 9F60FMH040 | 40E | | | | | | | | | | |
| 9F60FMH050 | 50E | | | | | | | | | | |
| 9F60HMH065 | 65E | 2 | Yes | 3 (76.2) | 18.88 (480) | 15.5 kV | 50kA | 9F61AGG401 (13.8kV nominal - 95kV BIL) 9F61AGJ401 (14.4kV nominal - 110kV BIL) | 9F61CGL409 | 9F61AGG405 (13.8kV nominal - 95kV BIL) 9F61AGJ405 (14.4kV nominal - 110kV BIL) | 9F61CGL410 |
| 9F60HMH080 | 80E | | | | | | | | | | |
| 9F60HMH100 | 100E | | | | | | | | | | |

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

Transformer Protection

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

15.5kV General Purpose fuses – 9F62 Series, EJO-1 – UL Listed 15" (381 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) |
|-------------|------------|----------------|------------|----------------------|--------------------|-------------|----------------|---|------------------------------|---|---------------------------------|
| 9F62DD050 | 50A | 1 | Yes | 3 (76.2) | 18.88 (480) | 15.5 kV | 50kA | 9F61AGG301 (13.8kV nominal - 95kV BIL) 9F61AGJ301 (14.4kV nominal - 110kV BIL) | 9F61CGL309 | 9F61AGG305 (13.8kV nominal - 95kV BIL) 9F61AGJ305 (14.4kV nominal - 110kV BIL) | 9F61CGL310 |
| 9F62DD065 | 65A | | | | | | | | | | |
| 9F62DD080 | 80A | | | | | | | | | | |
| 9F62DD100 | 100A | | | | | | | | | | |
| 9F62FDD125 | 125A | 2 | Yes | 3 (76.2) | 18.88 (480) | 15.5 kV | 50kA | 9F61AGG401 (13.8kV nominal - 95kV BIL) 9F61AGJ401 (14.4kV nominal - 110kV BIL) | 9F61CGL409 | 9F61AGG405 (13.8kV nominal - 95kV BIL) 9F61AGJ405 (14.4kV nominal - 110kV BIL) | 9F61CGL410 |
| 9F62FDD150 | 150A | | | | | | | | | | |
| 9F62FDD175 | 175A | | | | | | | | | | |
| 9F62FDD200 | 200A | | | | | | | | | | |

15.5kV E-Rated Amp-Trap CS-3 series – UL Listed 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) |
|-----------------|------------|----------------|------------|----------------------|--------------------|-------------|----------------|---|------------------------------|---|---------------------------------|
| A155F1COR0-5E | 5E | 1 | Yes | 2 (50.8) | 17.03 (433) | 15.5kV | 50kA | 9F61AGG201 (13.8kV nominal - 95kV BIL) 9F61AGJ201 (14.4kV nominal - 110kV BIL) | N/A | 9F61AGG205 (13.8kV nominal - 95kV BIL) 9F61AGJ205 (14.4kV nominal - 110kV BIL) | N/A |
| A155F1COR0-7E | 7E | | | | | | | | | | |
| A155F1COR0-10E | 10E | | | | | | | | | | |
| A155F1COR0-15E | 15E | | | | | | | | | | |
| A155F1COR0-20E | 20E | | | | | | | | | | |
| A155F1COR0-25E | 25E | | | | | | | | | | |
| A155F1COR0-30E | 30E | 1 | Yes | 3 (76.2) | 18.87 (479) | 15.5kV | 50kA | 9F61AGG301 (13.8kV nominal - 95kV BIL) 9F61AGJ301 (14.4kV nominal - 110kV BIL) | N/A | 9F61AGG305 (13.8kV nominal - 95kV BIL) 9F61AGJ305 (14.4kV nominal - 110kV BIL) | N/A |
| A155F1DOR0-10E | 10E | | | | | | | | | | |
| A155F1DOR0-15E | 15E | | | | | | | | | | |
| A155F1DOR0-20E | 20E | | | | | | | | | | |
| A155F1DOR0-25E | 25E | | | | | | | | | | |
| A155F1DOR0-30E | 30E | | | | | | | | | | |
| A155F1DOR0-40E | 40E | 2 | Yes | 3 (76.2) | 18.87 (479) | 15.5kV | 50kA | - | N/A | - | N/A |
| A155F1DOR0-50E | 50E | | | | | | | | | | |
| A155F2DOR0-65E | 65E | | | | | | | | | | |
| A155F2DOR0-80E | 80E | | | | | | | | | | |
| A155F2DOR0-100E | 100E | | | | | | | | | | |

15.5kV E-Rated Amp-Trap CS-3 series – UL Listed 18" (457 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) |
|-----------------|------------|----------------|------------|----------------------|--------------------|-------------|----------------|----------------------------|------------------------------|-------------------------------|---------------------------------|
| A155F1DOR0-65E | 65E | 1 | Yes | 3 (76.2) | 21.75 (552) | 15.5kV | 50kA | - | N/A | - | N/A |
| A155F1DOR0-80E | 80E | | | | | | | | | | |
| A155F1DOR0-100E | 100E | | | | | | | | | | |
| A155F2DOR0-125E | 125E | 2 | Yes | 3 (76.2) | 21.75 (552) | 15.5kV | 50kA | - | N/A | - | N/A |
| A155F2DOR0-150E | 150E | | | | | | | | | | |
| A155F2DOR0-175E | 175E | | | | | | | | | | |
| A155F2DOR0-200E | 200E | | | | | | | | | | |