

Motor Protection

Amp-Trap® and 9F60 Series

MEDIUM VOLTAGE FUSES

2.4kV, 2.54kV, 4.8kV, 5.08kV AND 7.2kV
FERRULE MOUNTED FUSES



Mersen R-Rated fuses are current-limiting, high interrupting rating fuses intended for the short circuit protection of medium voltage motors and motor controllers. R-Rated fuses are back-up fuses that have a minimum interrupting rating, and must be coordinated with overload relays in combination motor starters. These fuses come with a 3 (size D) or 4 (size E) inch diameter barrels with ferrules and are mounted in spring reinforced clips. Used in and required for replacement in motor controllers by many major manufacturers.

FEATURES/BENEFITS:

- The Amp-Trap and 9F60 R-Rated fuses are UL Recognized.
- Ferrule mounting for standard clips and interchangeability with other brands of fuses.
- Current-limiting for superior equipment protection.
- Metal embossed catalog number and manufacturing date for lasting identification.
- Blown-fuse indicator to give positive identification of open fuse.
 - Amp-Trap, 3" Barrel: 1 lb tripped force - 0.44 inch
 - 9F60: 0.125 lb tripped force - 0.20 inch
- Many parts offered in non-indicating versions for use in Class 1, Div 2 environments.
- Hook-eye option featured on some models for non-load break isolation by hookstick.
 - A051F part numbers include welded hook-eye feature and are designed for use in Eaton Ampgard MCC, and direct replacement for 5ACLS series Eaton fuses.
 - Optional hook-eye is also available on A480 part numbers, factory installed.

Ratings:

Amp-Trap

A240R

- **Volts:** 2.4kVAC
- **Amps:** 1 to 36R
- **IR:** 65kA Sym

A480R

- **Volts:** 4.8kVAC
- **Amps:** 2 to 36R
- **IR:** 64-65kA

A051F

- **Volts:** 5.08kV
- **Amps:** 2 to 24R
- **IR:** 50kA Sym

A072F

- **Volts:** 7.2kVAC
- **Amps:** 2 to 24R
- **IR:** 65kA Sym

9F60 SERIES TYPE EJ-2

9F60

- **Volts:** 2.54kVAC, 5.08kVAC
- **Amps:** 2 to 36R
- **IR:** 50kA Sym

APPLICATIONS:

- Short circuit protection of medium voltage motors and motor controllers.

APPROVALS:

- Amp-Trap: UL File E93367
- 9F60: UL File E191980



DEFINITIONS:

R-Rating: R-Rated fuses are back-up fuses that operate as follows (Per IEEE C37.42-2016): An R-Rated fuse will melt in the range of 15 to 35 seconds at a value of current equal to 100 times the “R” rating.

Back-up Current-Limiting Fuses: A back-up current-limiting fuse is a fuse that can interrupt any current between its rated minimum interrupting current and its maximum interrupting current. Back-up fuses are not designed or intended to open under overload conditions.

Continuous Ampere Rating at 40°C: The continuous amp rating defines the thermal capability of the fuse per IEEE C37.42-2016 and should not be the sole factor in fuse selection.

2.4kV FERRULE MOUNTED FUSES:

2.4kV R-Rated Amp-Trap Series
7.5" (191 mm) Clip Centers – Barrel diameter size D (3")



Catalog No.	Size	Continuous Amp rating at 40°C	Minimum Interrupting Rating RMS Amp	No of Barrels	Fig.	Indicating	Dimension L Inches [mm]	1 Phase interrupting rating	
								UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym
A240R1R	1R	35	100	1	A	Yes	10.88 [276]	65kA at 2.6kV	65kA at 2.6kV
A240R2R	2R	70	170						
A240R3R	3R	100	250						
A240R4R	4R	130	340						
A240R5R	5R	150	420						
A240R6R	6R	170	500						
A240R9R	9R	200	760						
A240R12R	12R	230	1000	2	B				
A240R18R	18R	390	1500						
A240R24R	24R	450	2000	3	C				
A240R36R	36R**	650	2900						

** Not recommended for use in fuse clips which grasp only one barrel.

2.4kV / 2.54kV Ferrule mounted fuses:

Indicator Flush with Surface

2 Lb. Force (Tripped)

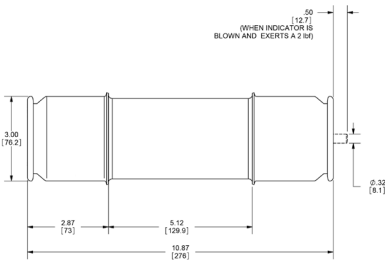


Figure A

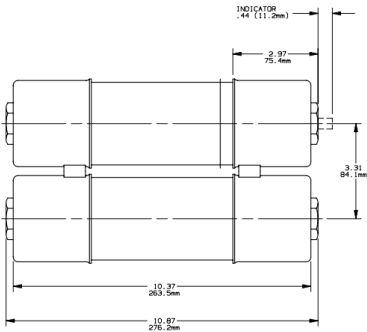


Figure B

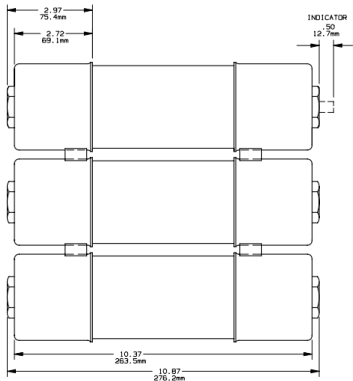


Figure C

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2.4kV AND 5.08kV FERRULE MOUNTED FUSES:

2.4kV R-Rated 9F60 EJ-2 Series

7" (179 mm) Clip Centers – Barrel diameter size D (3")

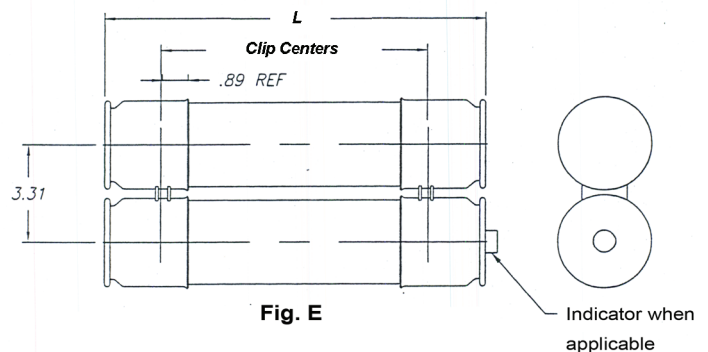
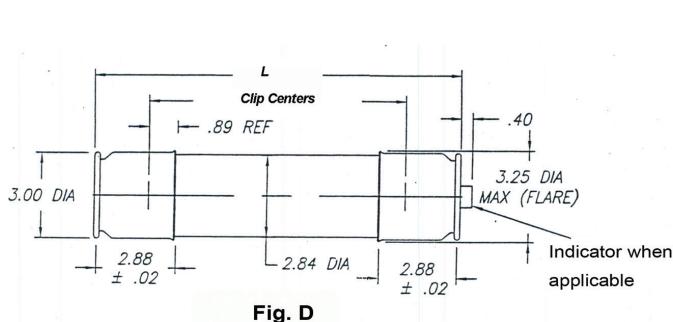


Catalog No.	Size	Continuous Amp rating at 40°C	Minimum Interrupting Rating RMS Amp	No of Barrels	Fig.	Indicating	Dimension L Inches (mm)	1 Phase interrupting rating	
								UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym
9F60LCB502	2R	70	195	1	D	Yes	10.88 (276)	50kA at 2.54kV	50kA at 2.54kV
9F60LCB503	3R	100	270						
9F60LCB504	4R	130	370						
9F60LCB506	6R	170	580						
9F60LCB509	9R	200	820						
9F60LCB512	12X	230	1150	2	E	No	10.88 (276)	50kA at 2.54kV	50kA at 2.54kV
9F60MCB518	18R	390	1800						
9F60MCB524	24R	450	2400						
9F60LCL302	2R	70	195	1	D	No	10.88 (276)	50kA at 2.54kV	50kA at 2.54kV
9F60LCL303	3R	100	270						
9F60LCL304	4R	130	370						
9F60LCL306	6R	170	580						
9F60LCL309	9R	200	820						
9F60LCL312	12X	230	1150	2	E	No	10.88 (276)	50kA at 2.54kV	50kA at 2.54kV
9F60MCL318	18R	390	1800						
9F60MCL324	24R	450	2400						

5.08kV R-Rated 9F60 EJ-2 Series

12" (305 mm) Clip Centers – Barrel diameter size D (3")

Catalog No.	Size	Continuous Amp rating at 40°C	Minimum Interrupting Rating RMS Amp	No of Barrels	Fig.	Indicating	Dimension L Inches (mm)	1 Phase interrupting rating	
								UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym
9F60LJD502	2R	70	195	1	D	Yes	15.97 (406)	50kA at 5.08kV	50kA at 5.08kV
9F60LJD503	3R	100	270						
9F60LJD504	4R	130	370						
9F60LJD506	6R	170	580						
9F60LJD509	9R	200	820						
9F60LJD512	12X	230	1150	2	E	No	15.97 (406)	50kA at 5.08kV	50kA at 5.08kV
9F60MJD518	18R	390	1800						
9F60MJD524	24R	450	2400						
9F60LJN302	2R	70	195	1	D	No	15.97 (406)	50kA at 5.08kV	50kA at 5.08kV
9F60LJN303	3R	100	270						
9F60LJN304	4R	130	370						
9F60LJN306	6R	170	580						
9F60LJN309	9R	200	820						
9F60LJN312	12X	230	1150	2	E	No	15.97 (406)	50kA at 5.08kV	50kA at 5.08kV
9F60MJN318	18R	390	1800						
9F60MJN324	24R	450	2400						



RV

*** Not recommended for use in fuse clips which grasp only one barrel.*

RV

Figure F: Dimensions and configurations of blown-fuse indicators.

Figure F (Side View):

- Overall height: 4.41 (111.8)
- Top section height: 0.41 (10.4)
- Bottom section height: 0.41 (10.4)
- Bottom section width: 0.34 (8.6)
- Bottom section depth: 0.34 (8.6)

Figure F-HE (Single Unit Front View):

- Width: 0.44 (11.17)
- Height: 3 (76.2)
- Top section height: 0.44 (11.17)
- Top section width: 0.44 (11.17)

Figure G (Two Unit Array Front View):

- Width: 3.312 (84.1)
- Height: 3 (76.2)
- Top section height: 0.44 (11.17)
- Top section width: 0.44 (11.17)

Figure H (Three Unit Array Front View):

- Width: 3.312 (84.1)
- Height: 3 (76.2)
- Top section height: 0.44 (11.17)
- Top section width: 0.44 (11.17)

Detail View: Blown-fuse Indicator (Tripped Position) for A480Rxxx-1HE models.

- Indicator window diameter: 0.34 Dia. Typ. (8)
- Distance between units: 1.0 (25.4)

4.8kV / 5.08kV FERRULE MOUNTED FUSES:

5.08kV R-Rated Amp-Trap Ferrule Mount w/ Hookeye, for use in Ampgard Switchgear



Catalog No.	Size	Continuous Amp rating at 40°C	Rated Minimum Interrupting Current	No of Barrels	Fig.	Indicating	Dimension L Inches (mm)	UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym
A051F1DHR0-2R	2R	70	220	1	I	Yes**	15.88 (403.2)	50kA @ 5.08kV	50kA @ 5.08kV
A051F1DHR0-3R	3R	100	270						
A051F1DHR0-4R	4R	130	360						
A051F1DHR0-5R	5R	150	450						
A051F1DHR0-6R	6R	170	600						
A051F1DHR0-9R	9R	200	900						
A051F1DHR0-12R	12R	230	1200	2	J	Yes**	15.88 (403.2)	50kA @ 5.08kV	50kA @ 5.08kV
A051F2DHR0-18R	18R	390	1500						
A051F2DHR0-24R	24R	450	2200						

** All part numbers available without indication by substituting "DHR0" w/ "DHRN". Example: A051F1DHRN-24R

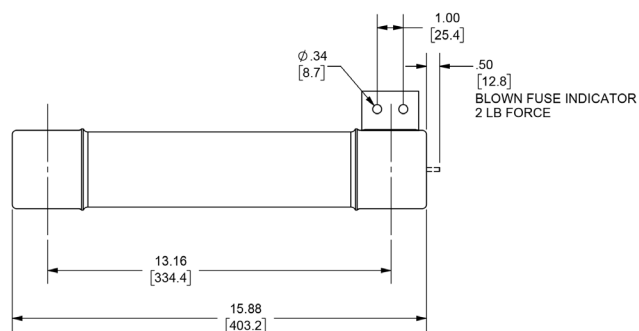


Figure I

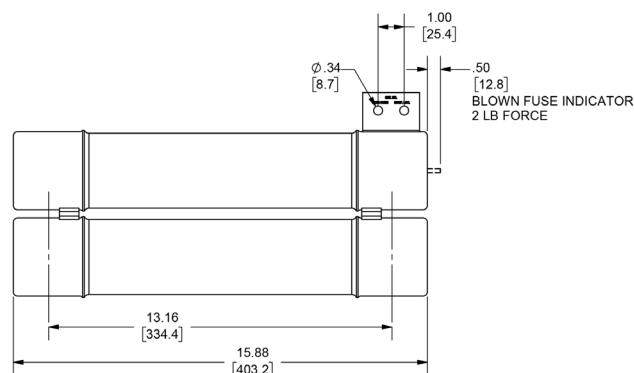


Figure J

Mouser Electronics

Authorized Distributor

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[A480R3R-1](#) [A480R4R-1](#) [A480R9R-1](#) [A480R6R-1](#) [A480R12R-1](#) [9F60LJD509](#) [9F60MJN318](#) [9F60LJD504](#)
[9F60LJN303](#) [A480R6R-1HE](#) [9F60LJD503](#) [A480R12R-1HE](#) [9F60LJN304](#) [9F60MJN324](#) [A480R36R-1](#) [A480R18R-1](#)
[A480R24R-1](#) [9F60LJD512](#) [A480R18R-1HE](#) [A480R9R-1HE](#) [9F60LJD502](#) [9F60LJN306](#) [9F60LJN312](#) [A480R2R-1HE](#)
[A480R5R-1HE](#) [9F60MJD518](#) [9F60LJN309](#) [9F60MJD524](#) [A480R2R-1](#) [A480R4R-1HE](#) [A480R24R-1HE](#)
[9F60LJD506](#) [9F60LJN302](#) [A480R3R-1HE](#) [A480R5R-1](#)