

# Motor Protection

## Amp-Trap® and 9F60 Series

### 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. The motor starter manufacturer generally specifies the R-Rated fuse size. These fuses come with a 3 (size D) or 4 (size E) inch diameter barrels with ferrules and are mounted in spring reinforced clips.

### 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.
- Hookeye for non load-break isolation by hookstick
  - On the 4.8kV an optional hookeye mounted in the factory is available.
  - On all other 3" barrel if a hookeye is required, use the operating eye 9F61AAW612. (See page E58)
- Blown-fuse indicator to give positive identification of open fuse.
  - Amp trap: 3" Barrel 2 lb tripped force - 0.50 Inch
  - 9F60: 0.125 lb tripped force – 0.20 Inch

### Highlights:

- R-Rated
- UL recognized

### Applications:

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

### Definitions:

**R-Rating:** R-Rated fuses are back-up fuses that operate as follows (Per ANSI C37.46-2000): 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 ANSI C37.46 and should not be the sole factor in fuse selection.



### Ratings:

#### Amp-Trap A240R

**Volts** : 2.4kV AC  
**Amps** : 1 to 36R  
**IR** : 65kA Sym

#### A480R

**Volts** : 4.8kV AC  
**Amps** : 2 to 36R  
**IR** : 50kA Sym

#### A072F

**Volts** : 7.2kV AC  
**Amps** : 2 to 24R  
**IR** : 50kA Sym

#### 9F60 SERIES TYPE EJ-2 9F60

**Volts** : 2.54kV AC  
: 5.08kV ac  
**Amps** : 2 to 36R  
**IR** : 50kA Sym

### Approvals:

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



# Motor Protection

## Amp-Trap® and 9F60 Series

### 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)

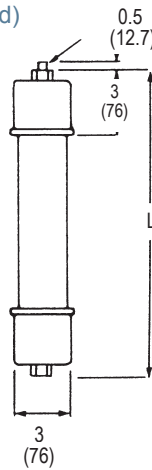


Figure A

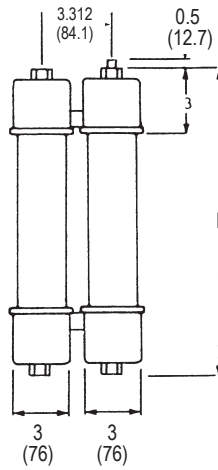


Figure B

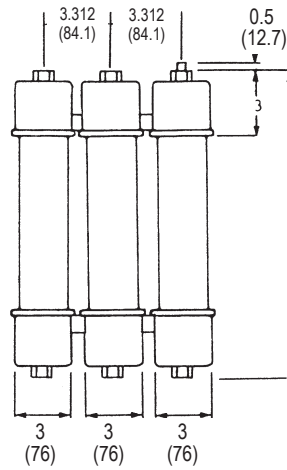


Figure C

# Motor Protection

## Amp-Trap® and 9F60 Series

### 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	12R	230	1150	2	E				
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	12R	230	1150	2	E				
9F60MCL318	18R	390	1800						
9F60MCL324	24R	450	2400						

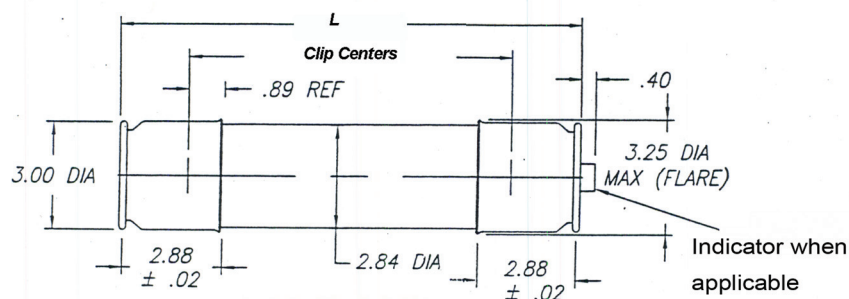


Fig. D

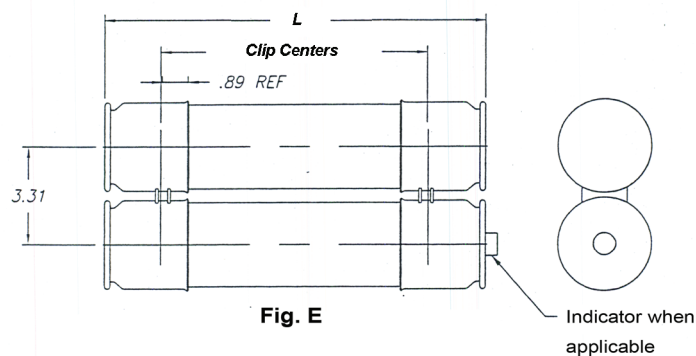


Fig. E