

# 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. 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" barrels if a hookeye is required, use the operating eye 9F61AAW612.
- 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

## Ratings:

### Amp-Trap

#### A240R

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

#### A480R

- **Volts:** 4.8kVAC
- **Amps:** 2 to 36R
- **IR:** 50kA Sym

#### A072F

- **Volts:** 7.2kVAC
- **Amps:** 2 to 24R
- **IR:** 50kA Sym

### 9F60 SERIES TYPE EJ-2

#### 9F60

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

## HIGHLIGHTS:

- R-Rated
- UL recognized

## 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 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.

### 2.4kV R-Rated Amp-Trap Series

7.5" (191 mm) Clip Centers – Barrel diameter size D (3")



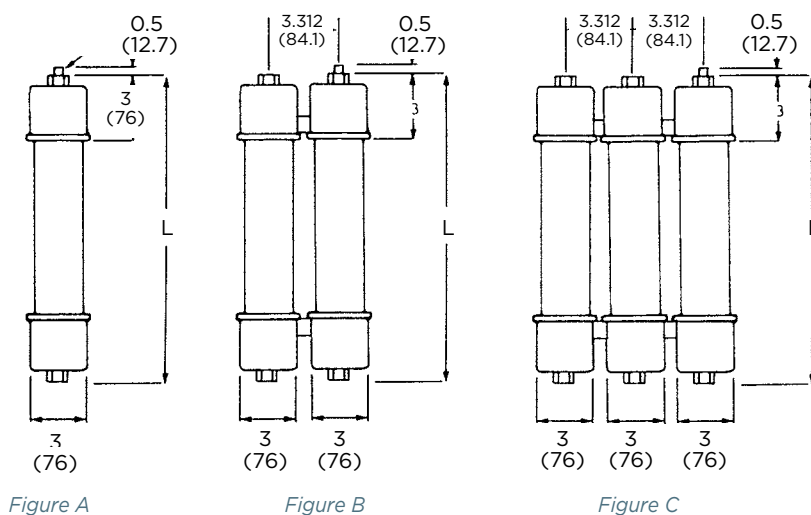
| Catalog No. | Size  | Continuous Amp rating at 40°C | Minimum Interrupting Rating RMS Amp | No of Barrels | Fig. | Indicating | Dimension L Inches (mm) | 1 Phase interrupting rating             |                                   |
|-------------|-------|-------------------------------|-------------------------------------|---------------|------|------------|-------------------------|-----------------------------------------|-----------------------------------|
|             |       |                               |                                     |               |      |            |                         | 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                                 | 2             | B    |            |                         |                                         |                                   |
| A240R12R    | 12R   | 230                           | 1000                                |               |      |            |                         |                                         |                                   |
| A240R18R    | 18R   | 390                           | 1500                                | 3             | C    |            |                         |                                         |                                   |
| A240R24R    | 24R   | 450                           | 2000                                |               |      |            |                         |                                         |                                   |
| 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)



## 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                                |               |      |            |                         |                                         |                                   |

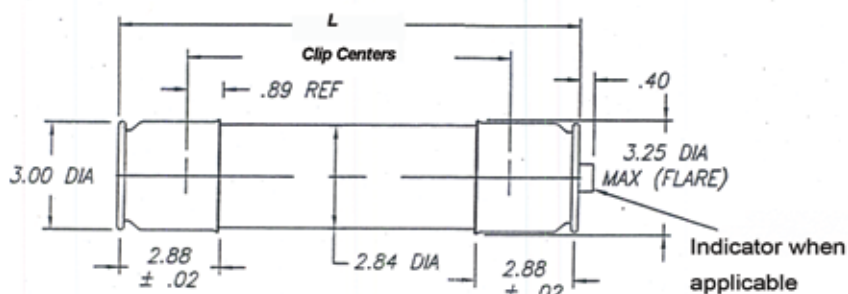


Fig. D

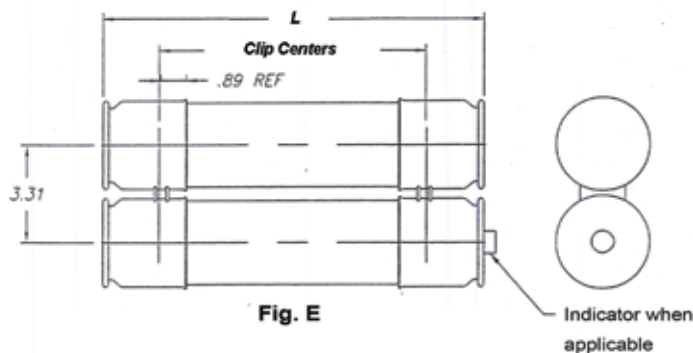


Fig. E