

# Motor Protection

## Amp-Trap® Bolt-In Series

### 5.08kV, 7.2kV and 15.5kV

#### Bolt-In 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 are single, double, triple or quadruple barrels 3 inches diameter with end mounts designed for bolting directly to equipment bus or terminal pads.

#### Features/Benefits:

- The Amp-Trap Bolt-in series are UL Recognized.
- Bolt-in mounting for direct connection to bus or terminals.
- 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 2 lb tripped force - 0.50 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

##### A051B

**Volts** : 5.08kV AC  
**Amps** : 2 to 38R  
**IR** : 65kA Sym

##### A072B

**Volts** : 7.2kV AC  
**Amps** : 2 to 24R  
: 19R to 57X

**IR** : 50kA Sym  
: 65kA Sym

##### A155B

**Volts** : 15.5kV AC  
**Amps** : 9 to 38X  
**IR** : 50kA Sym

#### Approvals:

- UL Recognized File E93367



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## Amp-Trap® Bolt-In Series

### 5.08kV / 7.2kV Bolt-In fuses:

#### 5.08kV R-Rated Amp-Trap Bolt-In Series



Catalog No.	Size	Continuous Amp rating at 40°C	Minimum Interrupting Rating RMS Amp	No of Barrels	Fig.	Indicating	1 Phase interrupting rating	
							UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym
A051B1DAR0-2R	2R	70	190	1	A	Yes	65kA at 5.08kV	65kA at 5.5kV
A051B1DAR0-3R	3R	100	225					
A051B1DAR0-4R	4R	130	330					
A051B1DAR0-6R	6R	170	500					
A051B1DAR0-9R	9R	200	740					
A051B2DAR0-18R	18R	390	1440	2	B	Yes	65kA at 5.08kV	65kA at 5.5kV
A051B2DAR0-24R	24R	450	1910					
A051B2DAR0-32R	32R	600	2500					
A051B2DAR0-38R	38R	700	3100	3	C	Yes	50kA at 5.08kV	50kA at 5.2kV
A051B3DAR0-48X	48X	750	3600					
A051B3DAR0-57X	57X	900	4500					

#### 7.2kV R-Rated Amp-Trap Bolt-In Series



Catalog No.	Size	Continuous Amp rating at 40°C	Minimum Interrupting Rating RMS Amp	No of Barrels	Fig.	Indicating	1 Phase interrupting rating	
							UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym
A072B1DAR0-2R	2R	70	190	1	A	Yes	50kA at 7.2kV	50kA at 7.7kV
A072B1DAR0-3R	3R	100	225					
A072B1DAR0-4R	4R	130	330					
A072B1DAR0-5R	5R	150	400					
A072B1DAR0-6R	6R	170	500					
A072B1DAR0-9R	9R	200	740	2	B	Yes	50kA at 7.2kV	50kA at 7.7kV
A072B1DAR0-12R	12R	230	955					
A072B2DAR0-18R	18R	390	1440					
A072B2DAR0-24R	24R	450	1910					

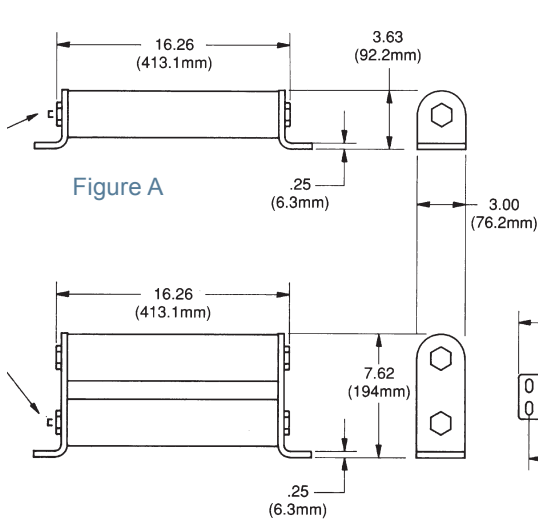


Figure B

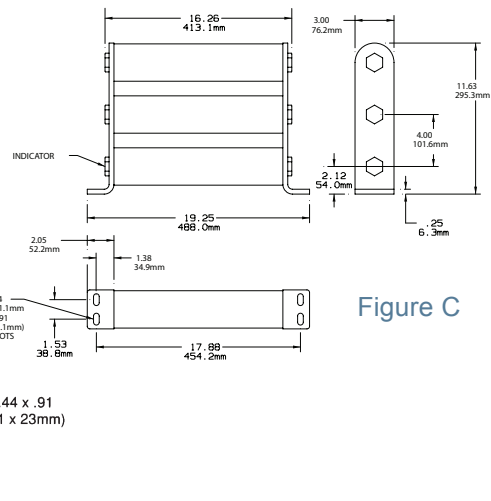


Figure C

# Motor Protection

## Amp-Trap® Bolt-In Series

### 7.2kV / 15.5kV Bolt-In fuses:

#### 7.2kV R-Rated Amp-Trap Bolt-In Series



Catalog No.	Size	Continuous Amp rating at 40°C	Minimum Interrupting Rating RMS Amp	Indicating	1 Phase interrupting rating		No of Barrels	Fig.
					UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym		
A072B1D0R0-19R	19R	300	1560	Yes	65kA at 7.2kV	65kA at 7.5kV	1	D
A072B2D0R0-32R	32R	540	3070			65kA at 7.66kV		
A072B2D0R0-38R	38R	600	3480			3	F	
A072B3DBR0-48X	48X	750	4360					
A072B3DBR0-57X	57X	900	5000					

#### 15.5kV R-Rated Amp-Trap Bolt-In Series



Catalog No.	Size	Continuous Amp rating at 40°C	Minimum Interrupting Rating RMS Amp	Indicating	1 Phase interrupting rating		No of Barrels	Fig.
					UL Component Recognition Max IR RMS Sym	Max Voltage Tested Max IR RMS Sym		
A155B2D0R0-9R	9R	200	888	Yes	50 kA at 15.5kV	50 kA at 15.5kV	2	G
A155B2D0R0-12R	12R	230	1200					
A155B3D0R0-18X	18X	390	1900			3	H	
A155B3D0R0-24X	24X	450	2633					
A155B4D0R0-32X	32X	600	3510					
A155B4D0R0-38X	38X	700	4000	4	J			

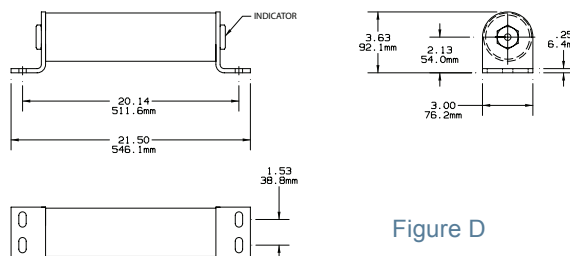


Figure D

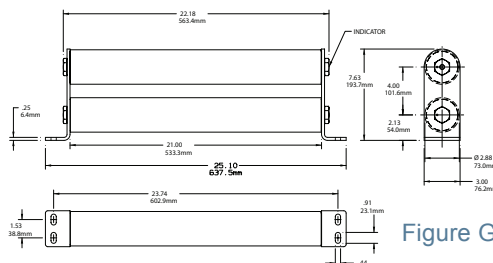


Figure G

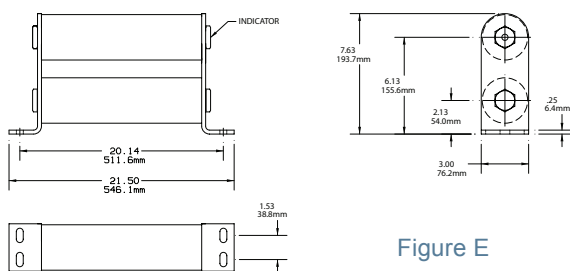


Figure E

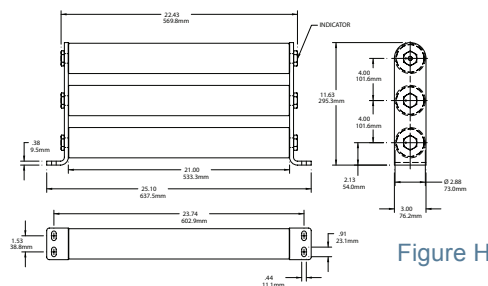


Figure H

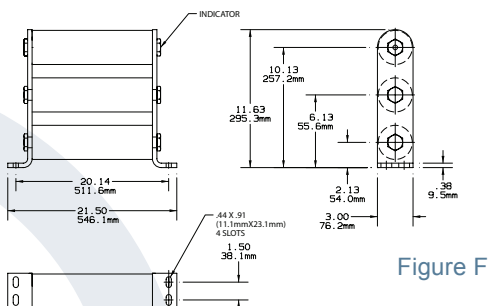


Figure F

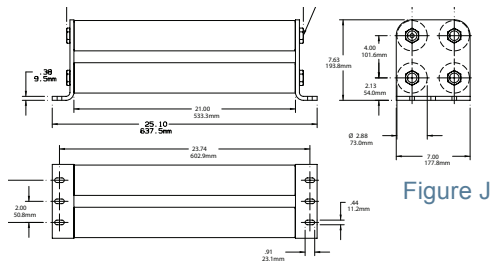


Figure J