

# EVpack-fuse MEV70

700 VDC Max., L/R ≤ 1ms, 35 - 600A

## BATTERY FUSES

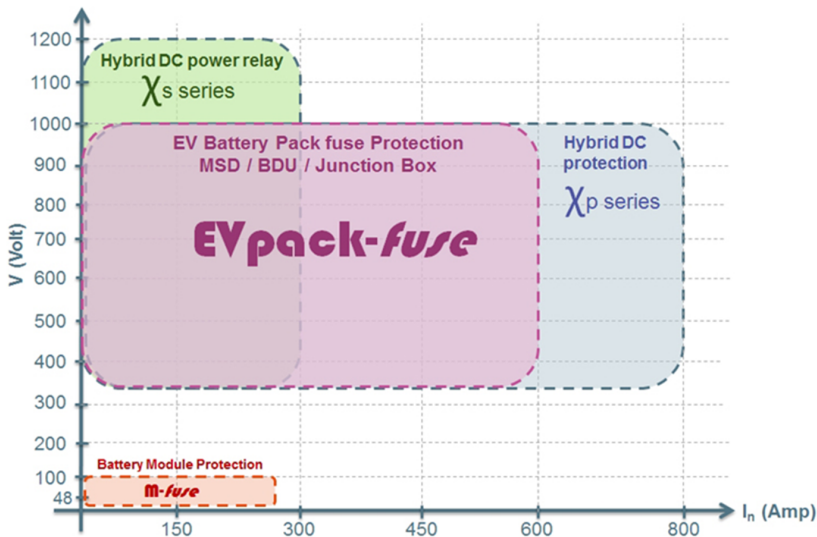
### BATTERY PACK FUSES



**EVpack-fuse** line-up belongs to the new DC Over-Current protection (O.C.P.) range developed by MERSEN to address specific needs in EV/HEV and Battery Electrical Storage System

**EVpack-fuse** provides the ultimate protection of the battery pack offering reliable clearing of DC fault currents.

It has been specifically engineered and tested to provide DC applications best-in-class protection performance: Up to 700VDC, Current rating (I<sub>n</sub>)= 35 to 600A, Interrupting Rating (IR) = 20kA, L/R ≤ 1ms, Minimum Breaking Capacity (MBC) < 3kA for a perfect matching with DC contactor in addition to withstanding high inrush current auxiliary applications (e.g. air conditioning...) with MEV70V.



## FEATURES & BENEFITS

- Design for DC applications
- Low watt losses
- High cycling performance
- Full coverage of battery module voltage and current
- Ultra compact size
- Current Ratings (I<sub>n</sub>): 35 to 600A
- Interrupting Rating (IR): 20kA @ 700VDC, L/R ≤ 1ms
- High inrush current capability

## APPLICATIONS

- EV/HEV
- Electrical Energy Storage
- Battery pack protection
- Battery Disconnect Unit (BDU)
- Battery Junction Box for auxiliaries
- Battery charger
- Supercapacitor pack protection
- Backup protection for DC relay / disconnecter / switch
- Maintenance Safety Disconnect (MSD)

## STANDARDS

- Complies to Automotive IATF 16949:2016 Quality System
- Power Cycling & Vibration JASO D622



EV pack-fuse

## PRODUCT RANGE



MEV70V160-S

### MEV70V -S Surface Mount Fuse

Catalog number	Rated voltage DC (UL)	Rated current I <sub>n</sub>	Power dissipation at 0.5 I <sub>n</sub>	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MEV70V35-S	700 V	35 A	0.86 W	125 A	5 s	5	9.9 g
MEV70V40-S	700 V	40 A	0.82 W	150 A	5 s	5	9.9 g
MEV70V50-S	700 V	50 A	1.2 W	175 A	5 s	5	9.9 g
MEV70V60-S	700 V	60 A	1.47 W	200 A	5 s	5	9.9 g
MEV70V70-S	700 V	70 A	1.89 W	200 A	30 s	5	59 g
MEV70V80-S	700 V	80 A	1.75 W	270 A	30 s	5	59 g
MEV70V100-S	700 V	100 A	2 W	330 A	30 s	5	59 g
MEV70V125-S	700 V	125 A	2.74 W	1500 A	150 ms	5	59 g
MEV70V150-S	700 V	150 A	3.54 W	1500 A	200 ms	5	59 g
MEV70V160-S	700 V	160 A	3.75 W	1500 A	300 ms	5	59 g
MEV70V175-S	700 V	175 A	4.63 W	1500 A	420 ms	5	59 g



MEV70A100-4



MEV70A400-4



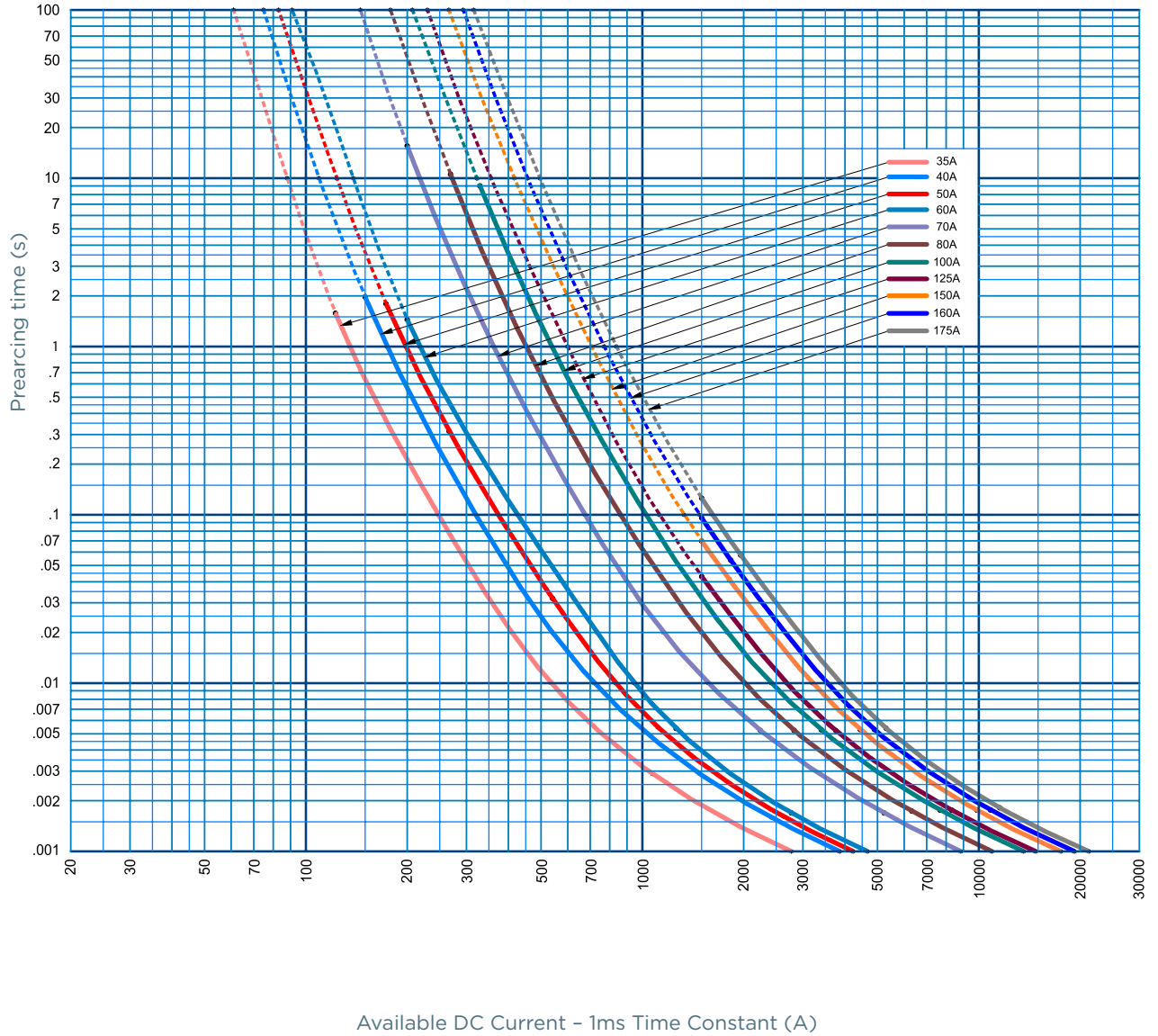
MEV70A600-4

### MEV70A Round Body Fuse

Catalog number	Rated voltage DC (UL)	Rated current I <sub>n</sub>	Power dissipation at 0.5 I <sub>n</sub>	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MEV70A50-4	700 V	50 A	1.4 W	380 A	50 ms	20	99 g
MEV70A60-4	700 V	60 A	1.8 W	460 A	50 ms	20	99 g
MEV70A70-4	700 V	70 A	2.2 W	540 A	50 ms	20	99 g
MEV70A80-4	700 V	80 A	2.5 W	610 A	50 ms	20	99 g
MEV70A90-4	700 V	90 A	2.7 W	690 A	50 ms	20	99 g
MEV70A100-4	700 V	100 A	3.1 W	760 A	50 ms	20	99 g
MEV70A125-4	700 V	125 A	3.8 W	870 A	60 ms	5	0.17 kg
MEV70A150-4	700 V	150 A	4.5 W	1040 A	60 ms	5	0.17 kg
MEV70A175-4	700 V	175 A	5.2 W	1210 A	60 ms	5	0.17 kg
MEV70A200-4	700 V	200 A	5.9 W	1380 A	60 ms	5	0.17 kg
MEV70A225-4	700 V	225 A	6.7 W	1190 A	140 ms	10	0.26 kg
MEV70A250-4	700 V	250 A	7.4 W	1320 A	140 ms	10	0.26 kg
MEV70A300-4	700 V	300 A	8.8 W	1580 A	140 ms	10	0.26 kg
MEV70A350-4	700 V	350 A	10.2 W	1840 A	140 ms	10	0.26 kg
MEV70A400-4	700 V	400 A	11.7 W	2100 A	140 ms	10	0.26 kg
MEV70A450-4	700 V	450 A	12.4 W	2200 A	360 ms	4	0.52 kg
MEV70A500-4	700 V	500 A	13.9 W	2460 A	360 ms	4	0.52 kg
MEV70A600-4	700 V	600 A	16.6 W	2950 A	360 ms	4	0.52 kg

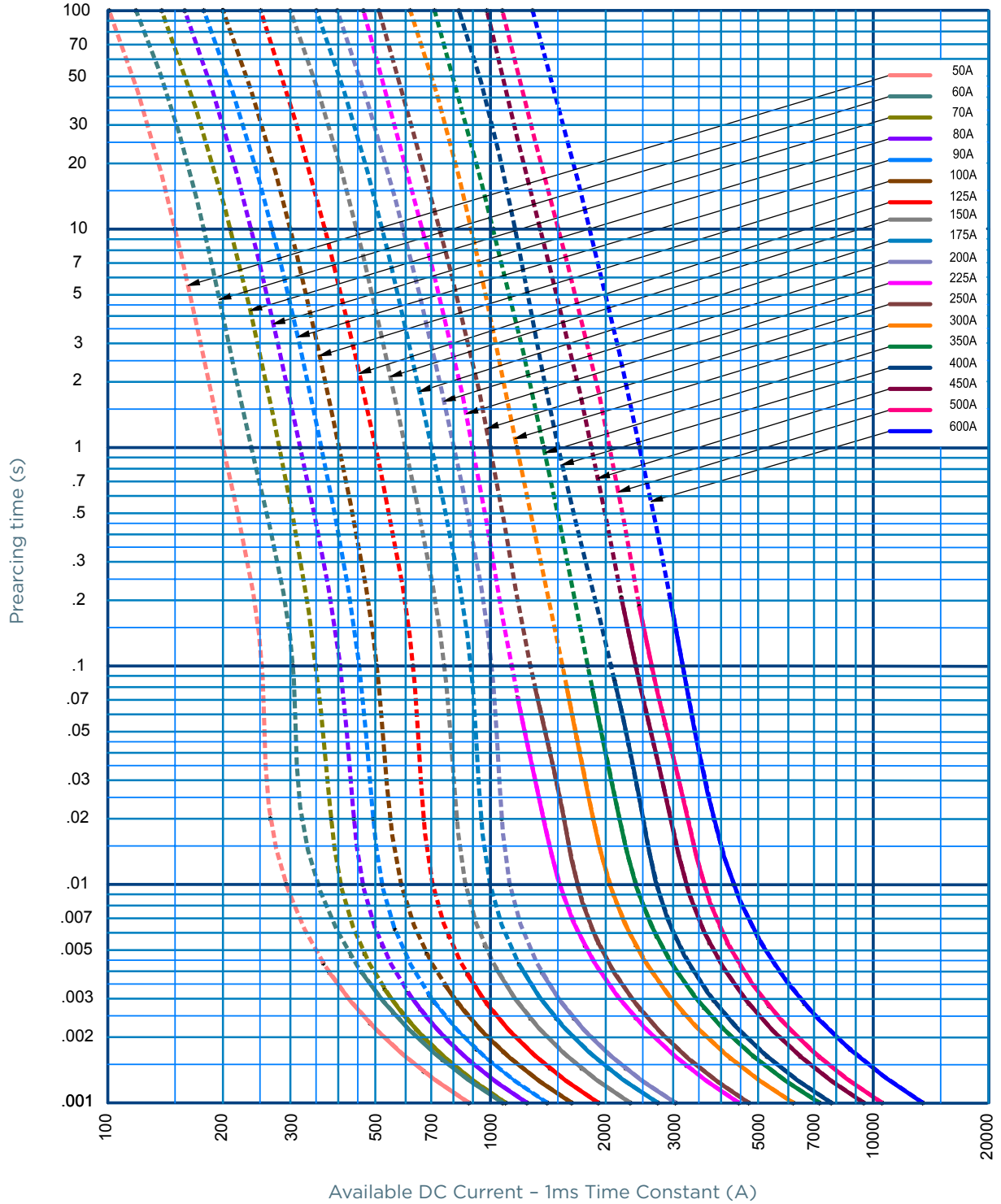
TIME CURRENT CHARACTERISTIC CURVES

MEV70V-S



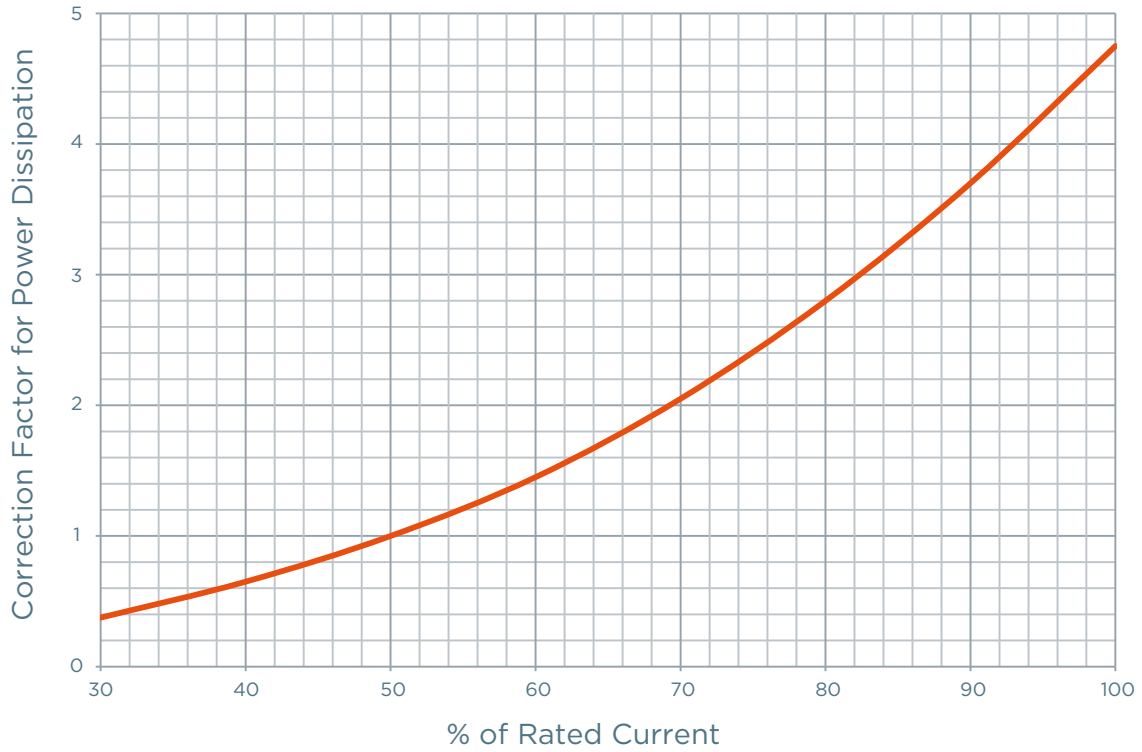
TIME CURRENT CHARACTERISTIC CURVES

MEV70A

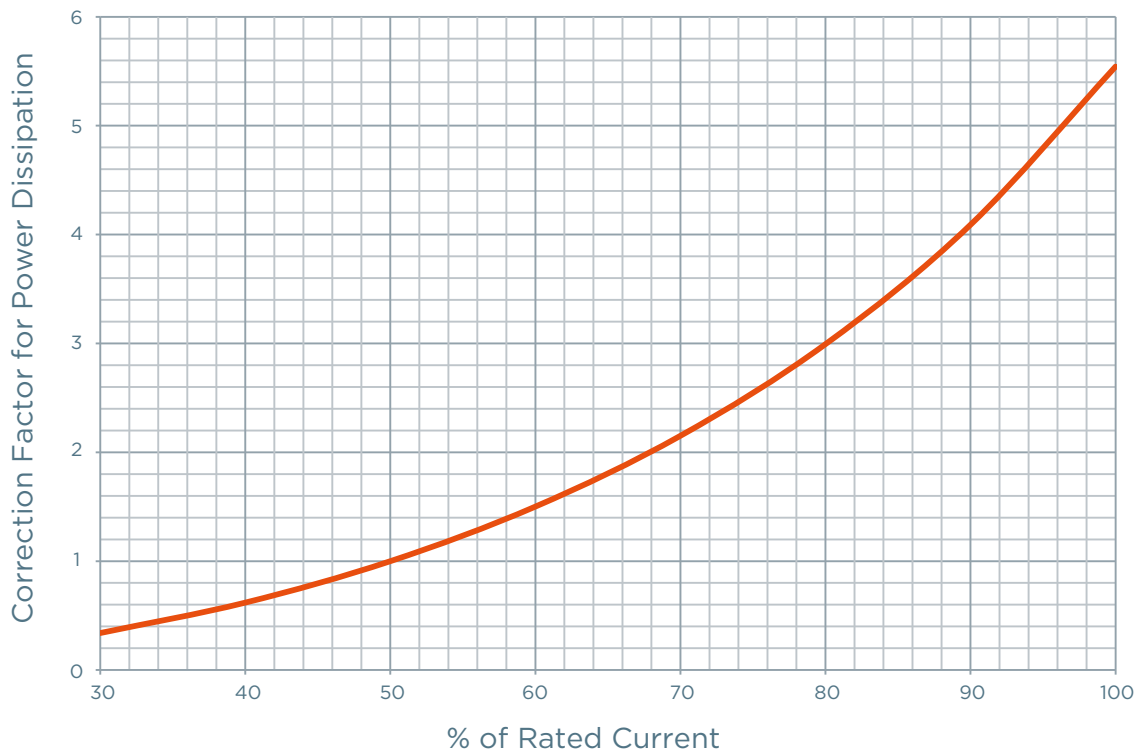


## POWER DISSIPATION

### MEV70V-S

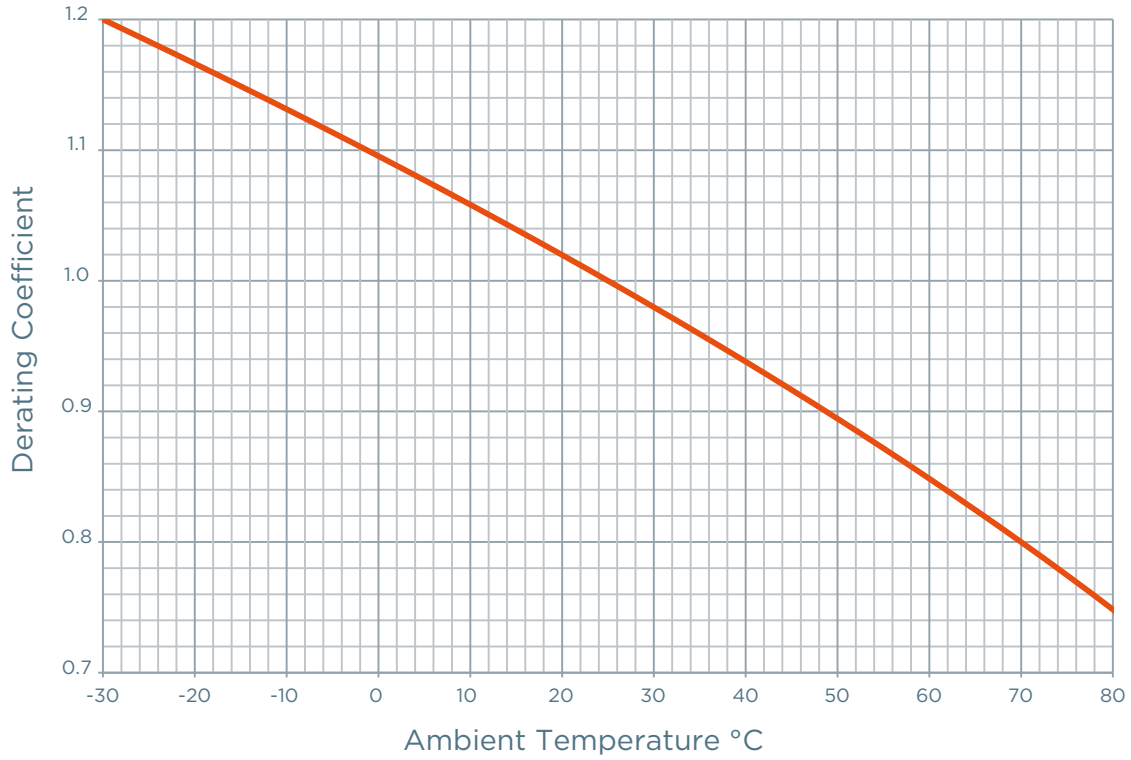


### MEV70A



## TEMPERATURE DERATING

### MEV70V-S & MEV70A



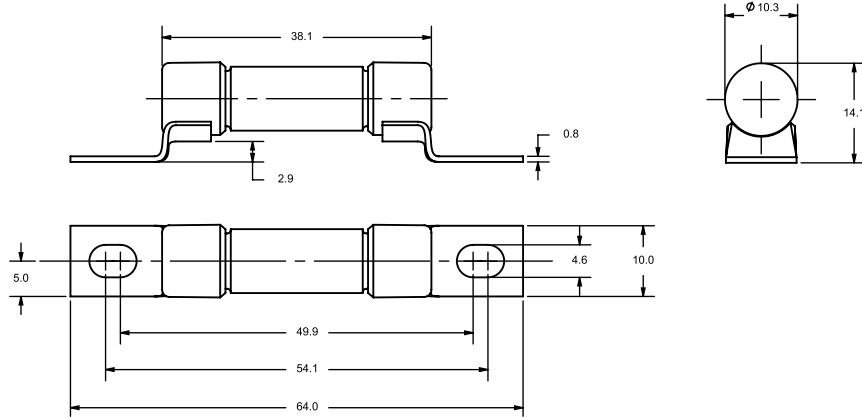
## DIMENSIONS

### Recommended Mounting Torque and Bolt Size

Fuse Type	Mounting Style	Fuse Rating	Thread Size	Tightening Torque	
				N-m	in-lbs
MEV70V	Surface mount (-S)	35 - 175A	1/4-20	4	50
MEV70A	Blade mount (-4)	50 - 200A	5/16-18	10	90
		225 - 600A	3/8-24	20	180

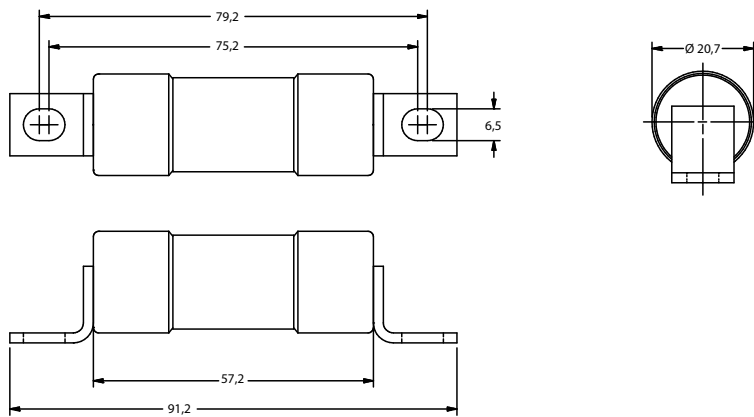
## DIMENSIONS

### MEV70V -S (35-60A)



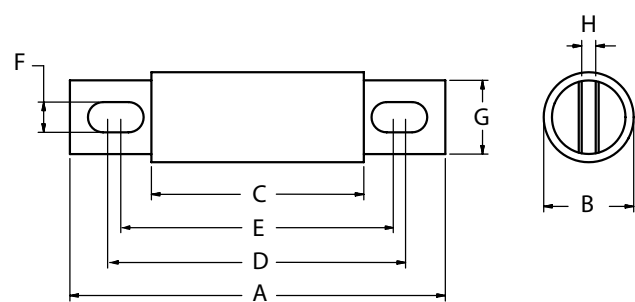
Dimensions in mm

### MEV70V -S (70-175A)



Dimensions in mm

### MEV70A -4 (50-600A)



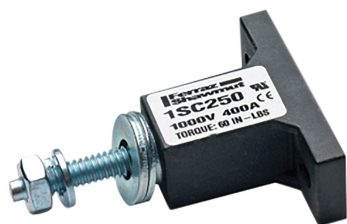
Dimensions in mm

Article Number	A	B	C	D	E	F	G	H
MEV70A50 to 100 (inch. / mm)	3,63 92,2	1 25,4	2,13 54,1	2,94 74,7	2,75 69,85	0,31 7,9	0,5 19	0,13 3,2
MEV70A125 to 200 (inch. / mm)	3,63 92,2	1,22 31	2,13 54,1	2,94 74,7	2,81 71,4	0,31 7,9	1 25,4	0,19 4,8
MEV70A225 to 400 (inch. / mm)	4,34 110	1,5 38,1	2,09 53,1	3,41 86,6	2,78 70,6	0,41 10,4	1 25,4	0,25 6,4
MEV70A450 to 600 (inch. / mm)	4,47 114	2 50,8	2,22 56,4	3,53 89,7	2,91 73,9	0,41 10,4	1,5 38,1	0,25 6,4

## ACCESSORIES



1SCM8



1SC250

### Fuse blocks

Catalog number	Item number	Rated DC voltage	Application DC Fuses	Contact Materials	Tightening torque (max.)	Weight
<b>P243 Fuse blocks</b>						
P243E	P243E	700 V	MEV70A fuses from 70 to 200A	Tin-plated Copper	4.1 N-m	0.12 kg
<b>P266 Fuse blocks</b>						
P266C	P266C	700 V	MEV70A fuses from 225 to 600A	Stainless Steel	20.3 N-m	0.40 kg
<b>1SC/1MSC Modular Fuse blocks</b>						
1SCM8	-	1500 V	MEV70A, MEV100A and ABAT15AA fuses up to 400A	Zinc-Plated Steel	6.8 N-m	68 g
1SC250	1SC250	1500 V	MF-A, MEV70A, MEV100A fuses up to 400A	Zinc-Plated Steel	6.9 N-m	68 g
1SC375	1SC375	1500 V	MF-A, MEV70A, MEV100A fuses up to 800A	Zinc-Plated Steel	21.7 N-m	68 g
1SCM10	-	1500 V	MF-A, MEV70A, MEV100A and ABAT15AD fuses up to 800A	Zinc-Plated Steel	21.5 N-m	68 g