

# M-fuse MF 100VDC Max.

L/R  $\leq 1.5\text{ms}$ , 50 - 200A

## BATTERY FUSES

### BATTERY MODULE FUSES



M- fuse line-up belongs to Mersen's DC Over-Current protection (O.C.P.) portfolio specifically developed to address Battery Electrical Storage System applications.

M- fuse provides the ultimate protection of EES battery modules 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 100VDC, Current rating ( $I_n$ ) = 50 to 200A, Interrupting Rating (IR) = 20kA, L/R  $\leq 1.5\text{ms}$ , Minimum Breaking Capacity (MBC) as low as  $3xI_n$ .

### TECHNICAL DATA OVERVIEW

Voltage DC	100 VDC
L/R	$\leq 1.5\text{ms}$
Ampere Range (A)	50 ... 200 A
I.R	20kA

### 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 ( $I_n$ ): 50 to 200A
- Interrupting Rating: 20kA @ 100VDC, L/R  $\leq 1.5\text{ms}$

### APPLICATIONS

- Battery modules protection
- Electrical Energy Storage
- Supercapacitor module protection

### STANDARDS

- IEC 60 269-4
- UL/cUL recognized component, UL file E76491 and E60314



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## PRODUCT RANGE



MF100A-4

### MF-A Round Body Fuse

Catalog number	Rated voltage DC (UL)	Rated current $I_n$	Power dissipation at 0.5 $I_n$	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MF50A-4	100 V	50 A	0.8 W	180 A	50 ms	5	68 g
MF60A-4	100 V	60 A	0.9 W	210 A	50 ms	5	68 g
MF70A-4	100 V	70 A	1.1 W	250 A	50 ms	5	68 g
MF80A-4	100 V	80 A	1.6 W	280 A	50 ms	5	68 g
MF90A-4	100 V	90 A	1.8 W	320 A	50 ms	5	68 g
MF100A-4	100 V	100 A	2 W	360 A	50 ms	5	68 g
MF125A-4	100 V	125 A	2.6 W	450 A	50 ms	5	68 g
MF150A-4	100 V	150 A	3.2 W	540 A	50 ms	5	68 g
MF175A-4	100 V	175 A	4 W	630 A	50 ms	5	68 g
MF200A-4	100 V	200 A	4.4 W	720 A	50 ms	10	68 g



MF125B-4

### MF-B Cylindrical Body Fuse

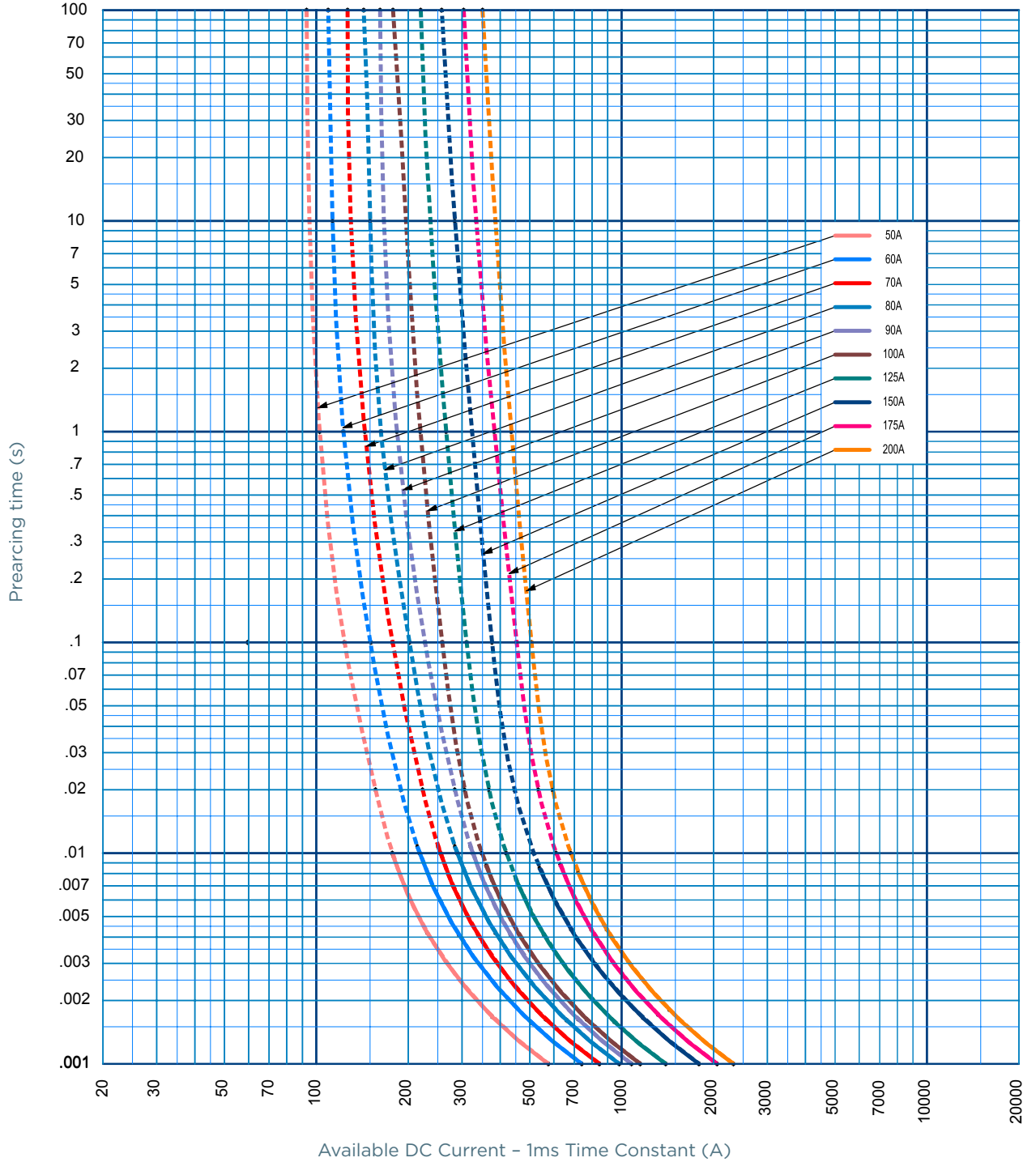
Catalog number	Reference number	Rated voltage DC (UL)	Rated current $I_n$	Power dissipation at 0.5 $I_n$	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MF50B-4	D1057589	100 V	50 A	1.8 W	140 A	10 s	10	28 g
MF60B-4	E1057590	100 V	60 A	2.1 W	170 A	10 s	10	28 g
MF75B-4	F1057591	100 V	75 A	2.7 W	210 A	10 s	10	28 g
MF80B-4	G1057592	100 V	80 A	2.7 W	225 A	10 s	10	28 g
MF100B-4	H1057593	100 V	100 A	2.3 W	280 A	10 s	10	28 g
MF125B-4	J1057594	100 V	125 A	2.5 W	350 A	10 s	10	28 g
MF150B-4	K1057595	100 V	150 A	2.7 W	420 A	10 s	10	28 g
MF160B-4	L1057596	100 V	160 A	3.1 W	450 A	10 s	10	28 g
MF180B-4	M1057597	100 V	180 A	3.4 W	500 A	10 s	10	28 g

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## TIME CURRENT CHARACTERISTIC CURVES

MF-A

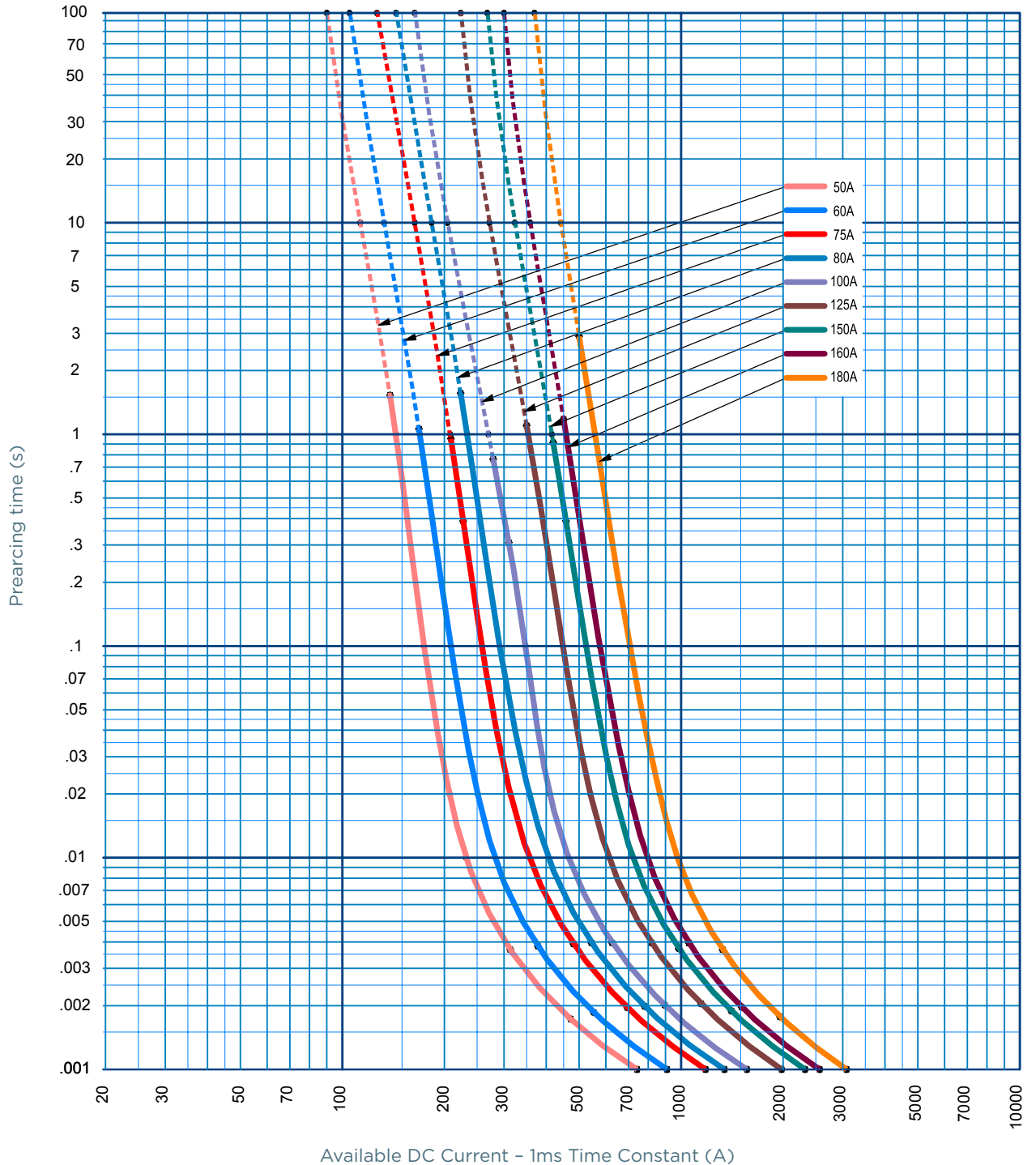


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## TIME CURRENT CHARACTERISTIC CURVES

### MF-B

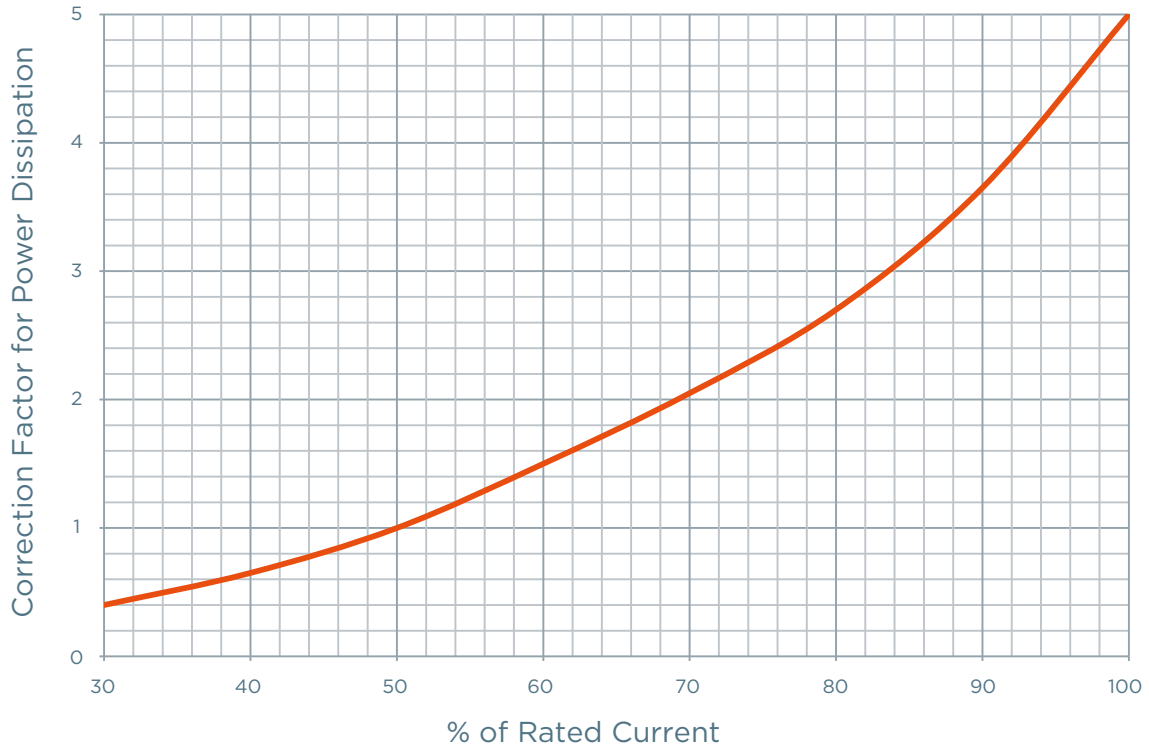


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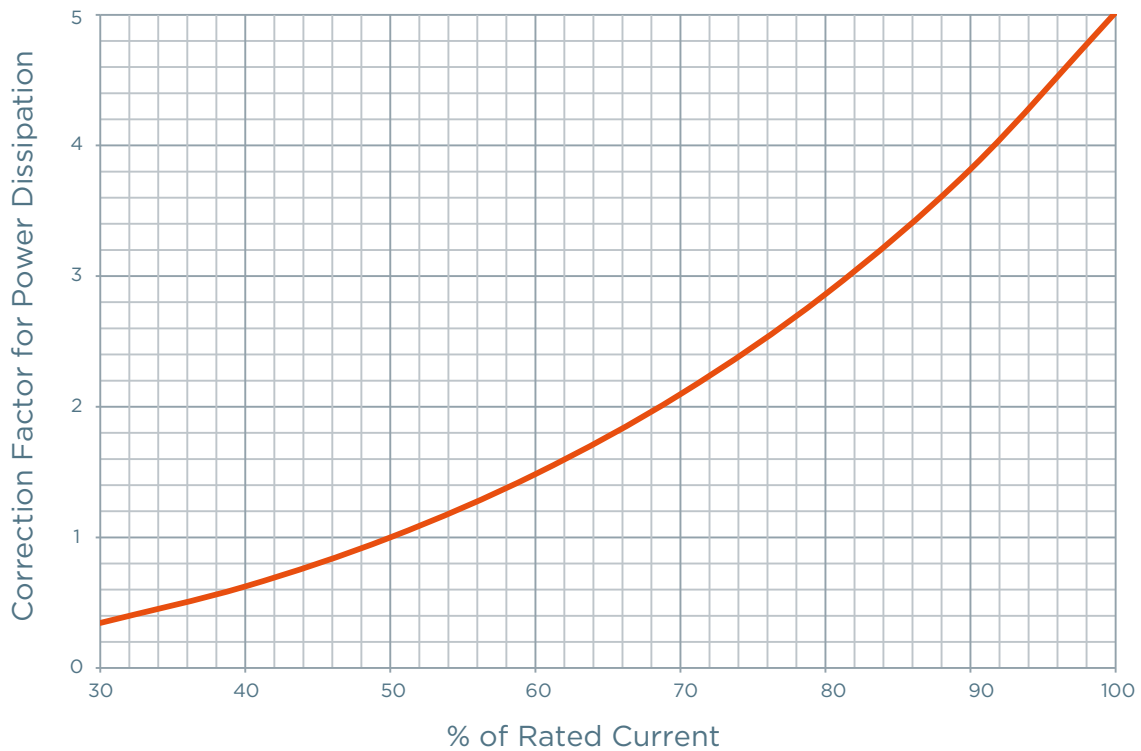
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## POWER DISSIPATION

### MF-A



### MF-B

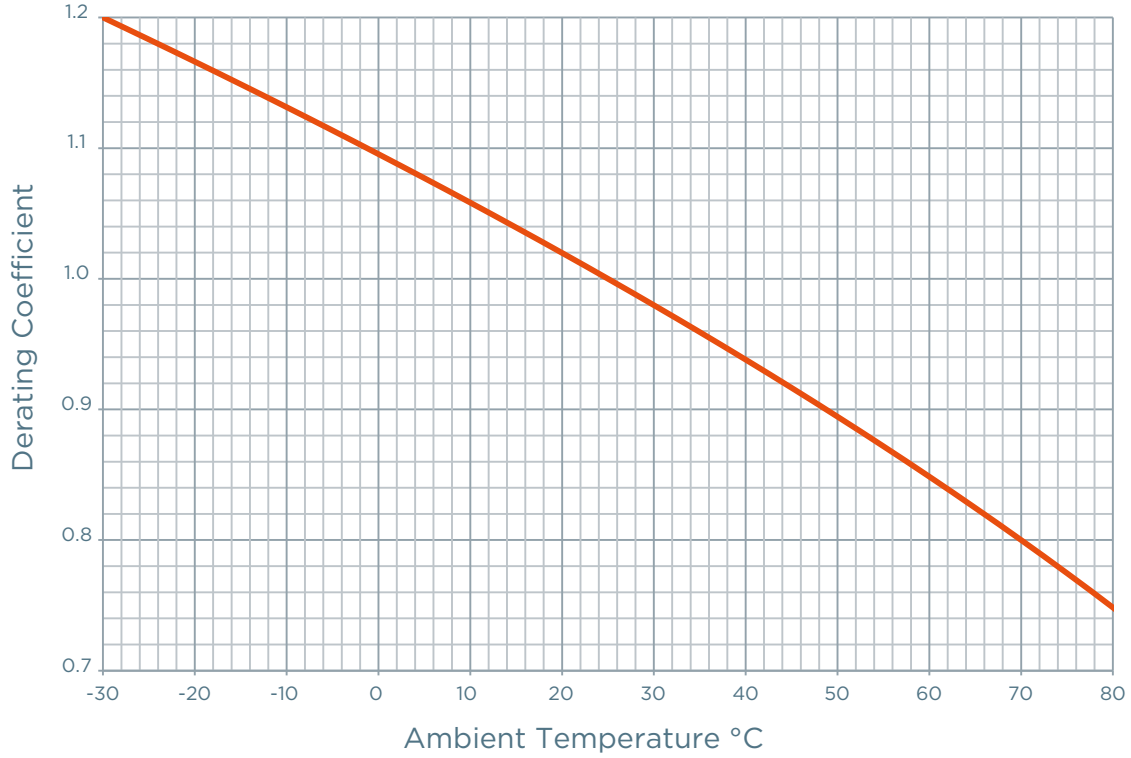


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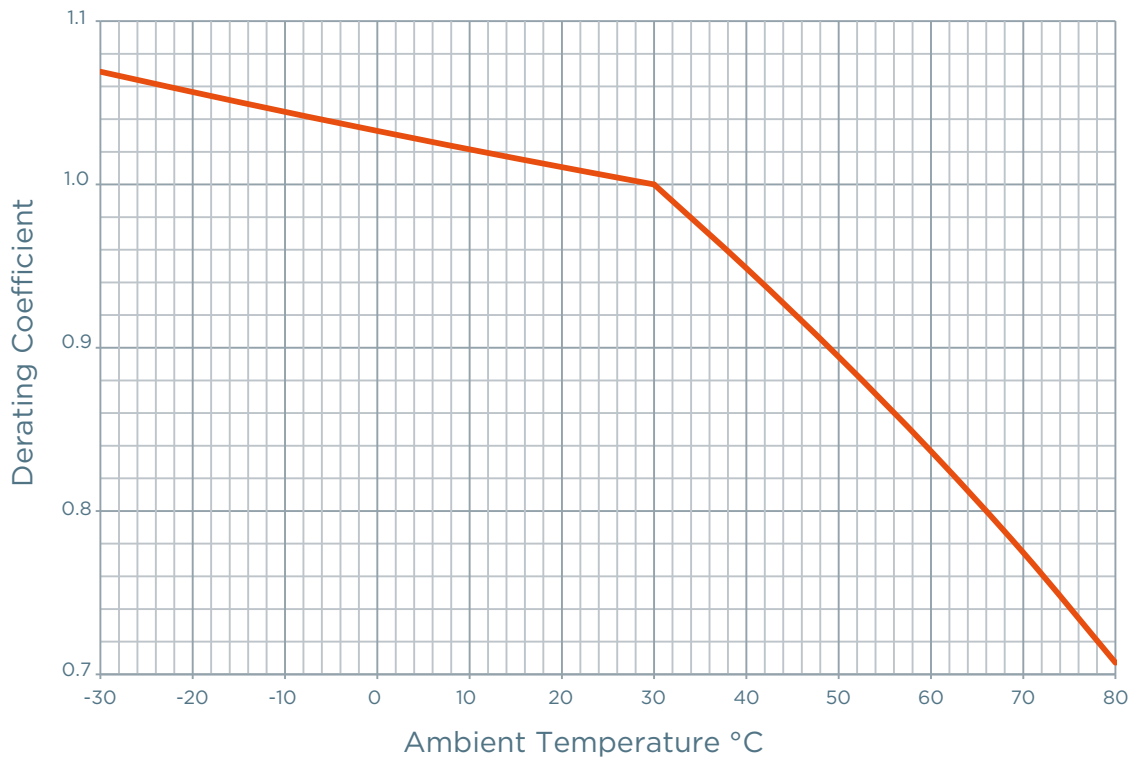
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## TEMPERATURE DERATING

### MF-A



### MF-B

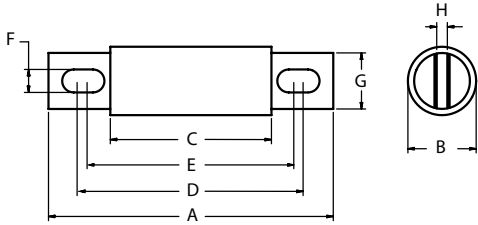


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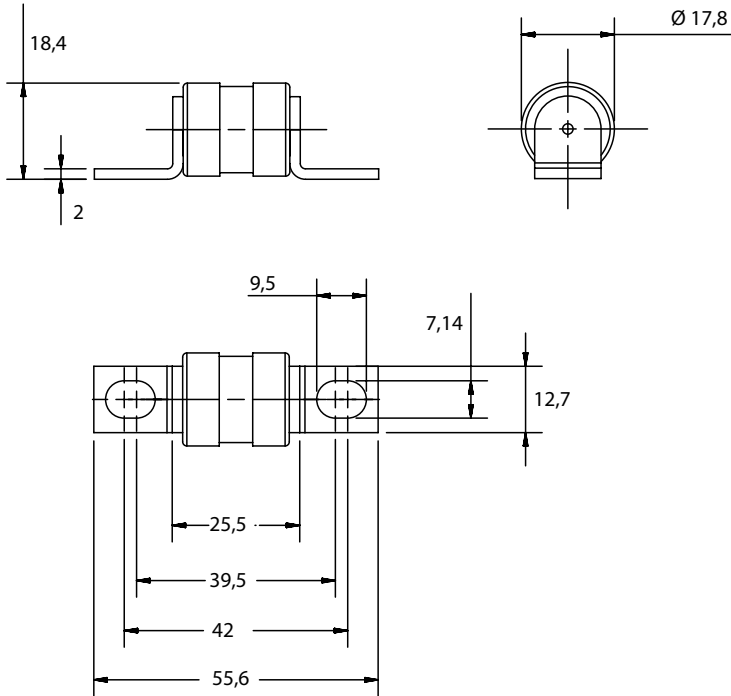
## DIMENSIONS

### MFA -4 (50-200A)



Article Number	A	B	C	D	E	F	G	H
MF50A-4 to MF200A-4 (inch. / mm)	2,66 67,6	1 25,4	1,16 29,5	2,19 55,6	1,88 47,6	0,31 7,9	0,74 18,8	0,13 3,3

### MFB -4 (50-180A)



Dimensions in mm

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## 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>						
P243D	P243D	1000 V	MF-A fuses from 70 to 450A	Tin-plated Copper	4.1 N-m	0.12 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