

MDC06A - DC Distribution Fuse

600V DC/AC 10x38mm Auxiliary Fuse

SPECIAL PURPOSE

FOR DC DISTRIBUTION



MDC
DC Distribution Series

With the evolution of DC distribution and new technologies on the horizon, Mersen's MDC DC Distribution Series is the product line to help customers achieve ultimate protection for today and tomorrow. The product portfolio allows system integrators and OEM manufacturers to select fuses easily for the protection of DC distribution in a variety of applications.

The MDC Series incorporates proven fuse technologies which provide optimal current limitation while achieving maximum performance. The MDC portfolio is designed to easily allow customers to choose fuses where coordination with other DC components is critical, eliminating unnecessary downtime.

Technical Data Overview	
Volts	600VDC/AC
Amps	1-50A
IR	100kA @ 600VDC/VAC (1A to 30A) 20kA @ 600VDC (35A to 50A) 50kA @ 250VDC (35A to 50A)
AC MBC	2.0 x In @ Rated Voltage (1-30A) 2.5 x In @ Rated Voltage (35-50A)
DC MBC	2.0 x In @ Rated Voltage (1-30A) L/R ≤ 1ms 3.6 x In @ Rated Voltage (35-50A) L/R ≤ 1ms

FEATURES/BENEFITS

- Designed for DC applications
- Low watt losses
- High cycling performance
- Low & high current interrupting capability
- Ultra compact size

APPLICATIONS

- DC Distribution
- DC Cabling and Bus
- DC Auxiliary Circuits
- Electrical Energy Storage
- EV Charging
- Critical Power
- UPS Protection

APPROVALS/STANDARDS

- UL Listed E33925 (1-30A)
- DC Listed (1-30A)
- UL Recognized Component File E60314 (35-50A)








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CATALOG NUMBERS

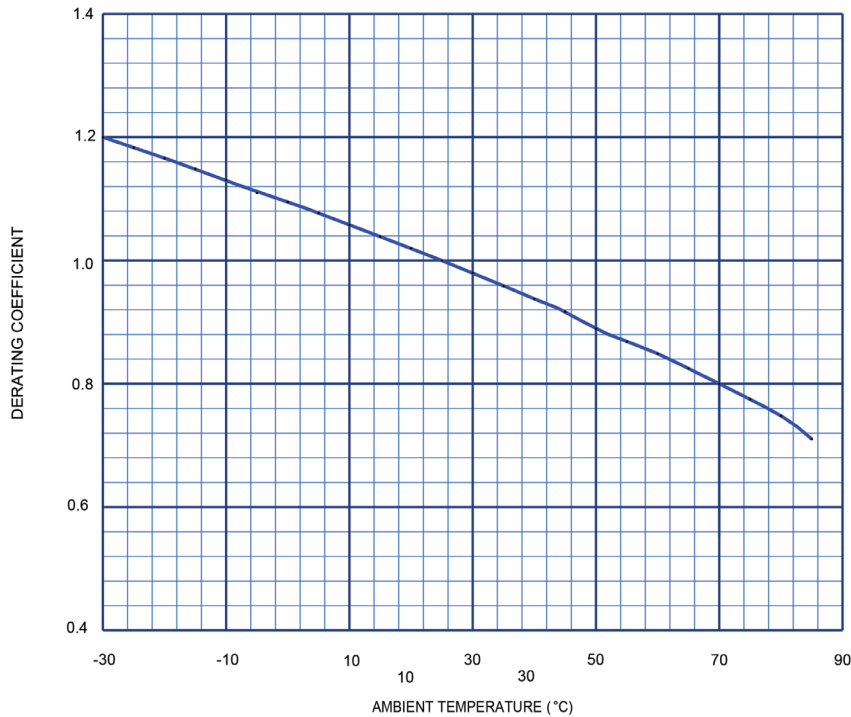
Ferrule			Surface Mount			PC Mount		
 			 			 		
MDC06A30			MDC06A30S			MDC06A30P		
Catalog Number			Rated Voltage [VAC]	Rated Voltage [VDC]	Rated Current [A]	DC Min. Breaking Capacity [MBC]*	DC Max Interrupting Rating [kA]	DC Time Constant L/R [ms]
MDC06A1	MDC06A1S	MDC06A1P	600	600	1	2	100	≤1
MDC06A2	MDC06A2S	MDC06A2P	600	600	2	4	100	≤1
MDC06A3	MDC06A3S	MDC06A3P	600	600	3	6	100	≤1
MDC06A4	MDC06A4S	MDC06A4P	600	600	4	8	100	≤1
MDC06A5	MDC06A5S	MDC06A5P	600	600	5	10	100	≤1
MDC06A6	MDC06A6S	MDC06A6P	600	600	6	12	100	≤1
MDC06A7	MDC06A7S	MDC06A7P	600	600	7	14	100	≤1
MDC06A8	MDC06A8S	MDC06A8P	600	600	8	16	100	≤1
MDC06A10	MDC06A10S	MDC06A10P	600	600	10	20	100	≤1
MDC06A12	MDC06A12S	MDC06A12P	600	600	12	24	100	≤1
MDC06A15	MDC06A15S	MDC06A15P	600	600	15	30	100	≤1
MDC06A20	MDC06A20S	MDC06A20P	600	600	20	40	100	≤1
MDC06A25	MDC06A25S	MDC06A25P	600	600	25	50	100	≤1
MDC06A30	MDC06A30S	MDC06A30P	600	600	30	60	100	≤1
MDC06A35	MDC06A35S	MDC06A35P	600	600	35	126	20	≤1
MDC06A40	MDC06A40S	MDC06A40P	600	600	40	144	20	≤1
MDC06A50	MDC06A50S	MDC06A50P	600	600	50	180	20	≤1

*Fuse Minimum Breaking Capacity [MBC]: the smallest current the fuse has been tested to safely clear at a given voltage and time constant

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AMPERE RATING VS AMBIENT TEMPERATURE

MDC06A



I²t DATA AT 600VAC, 100KA SYM. RMS AMPERES, 20% POWER FACTOR

MDC06A

Ampere Rating	Melting I ² t [A ² s]	Clearing I ² t at 600v [A ² s]
1/10	0.01	0.03
1/8	0.016	0.04
2/10	0.04	0.11
1/4	0.063	0.18
1/2	0.25	0.7
3/4	0.56	1.6
1	1.7	5
1 1/2	4	8
2	6.7	13
3	3.3	8
4	10.4	22
5	22	60
6	50	130
7	65	180
8	64	420
10	130	650
12	190	900
15	130	800
20	270	1600
25	510	2500
30	920	3800

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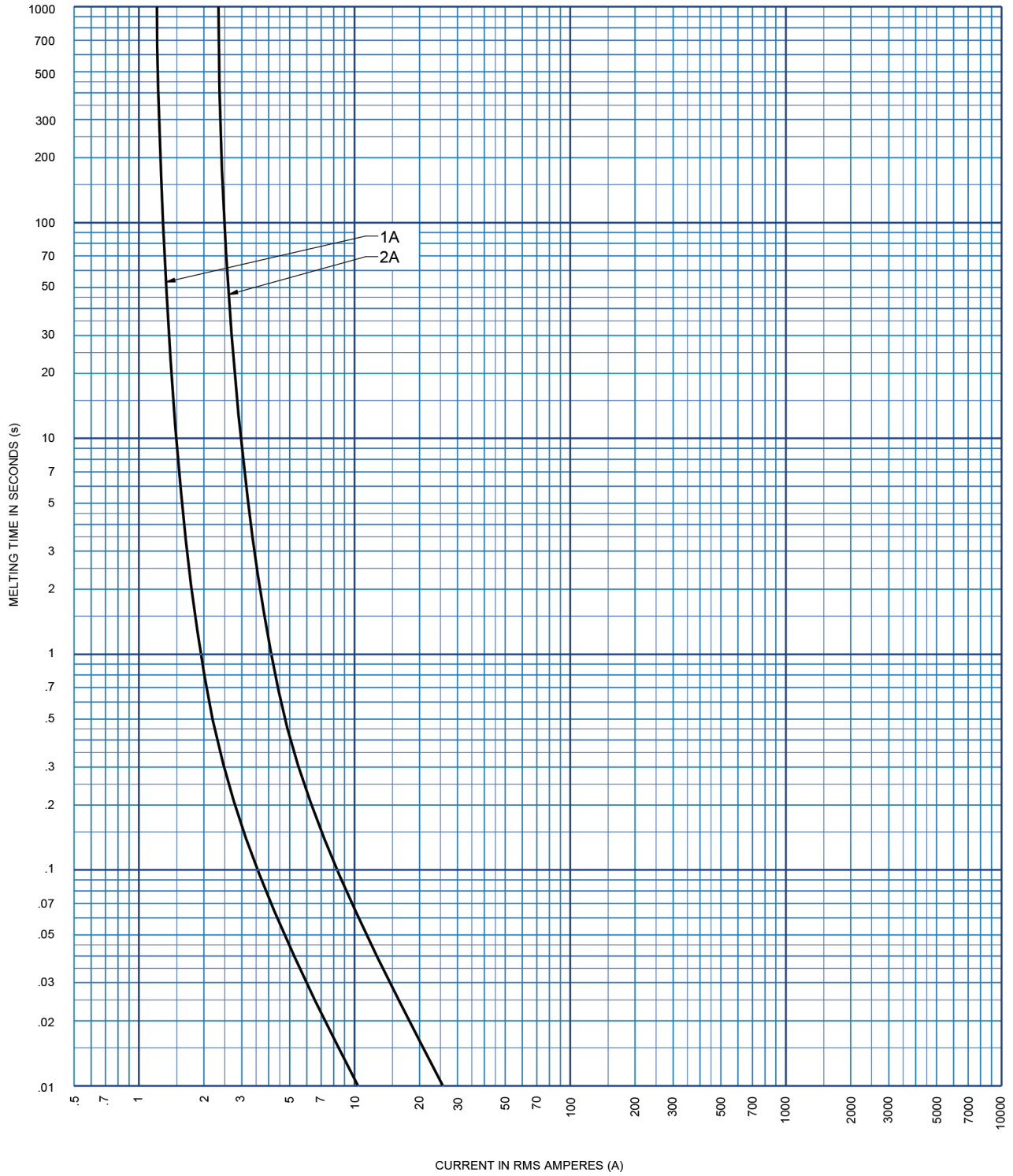
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MELTING TIME CURRENT DATA

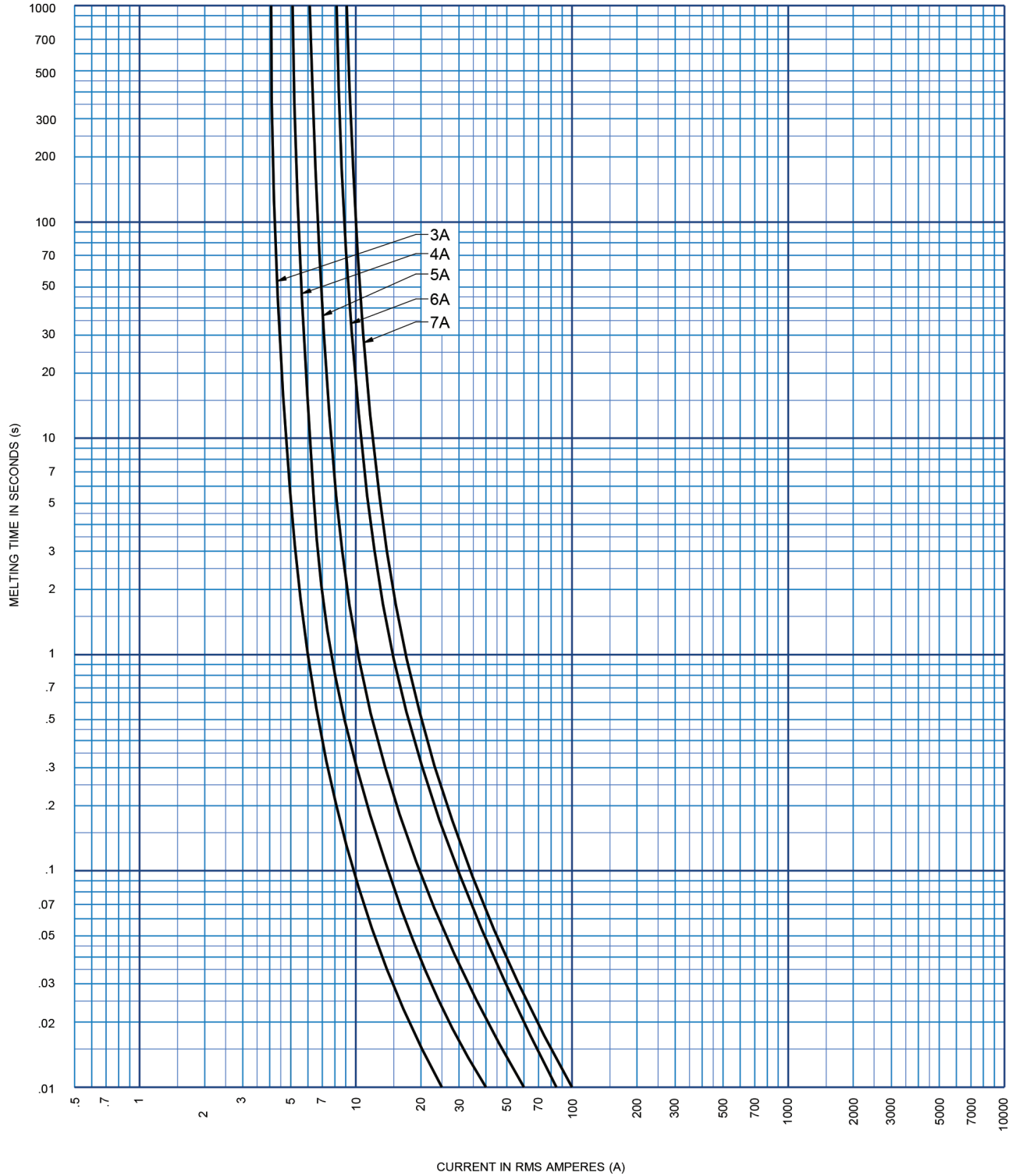
MDC06A 1-2A



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MELTING TIME CURRENT DATA

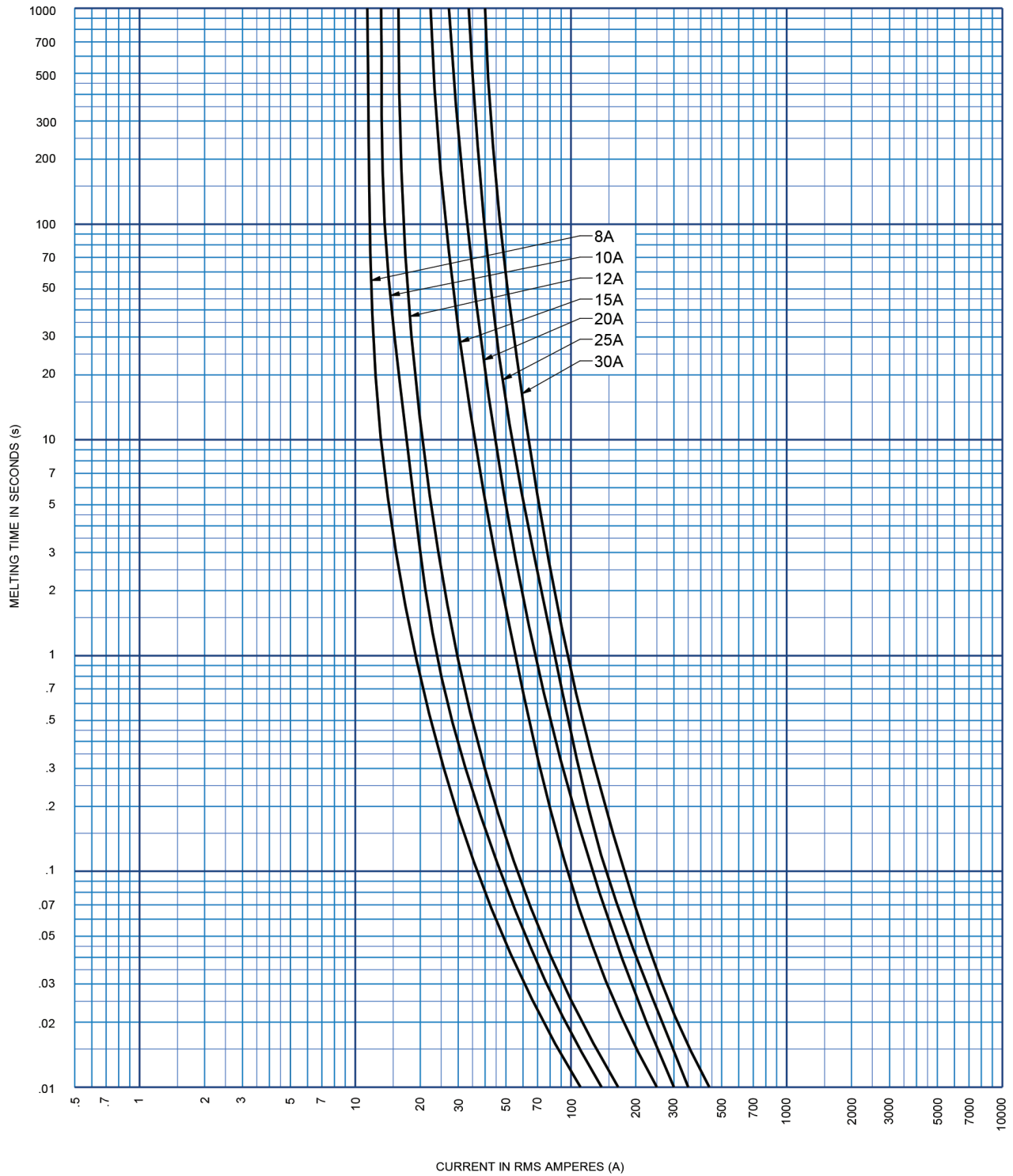
MDC06A 3-7A



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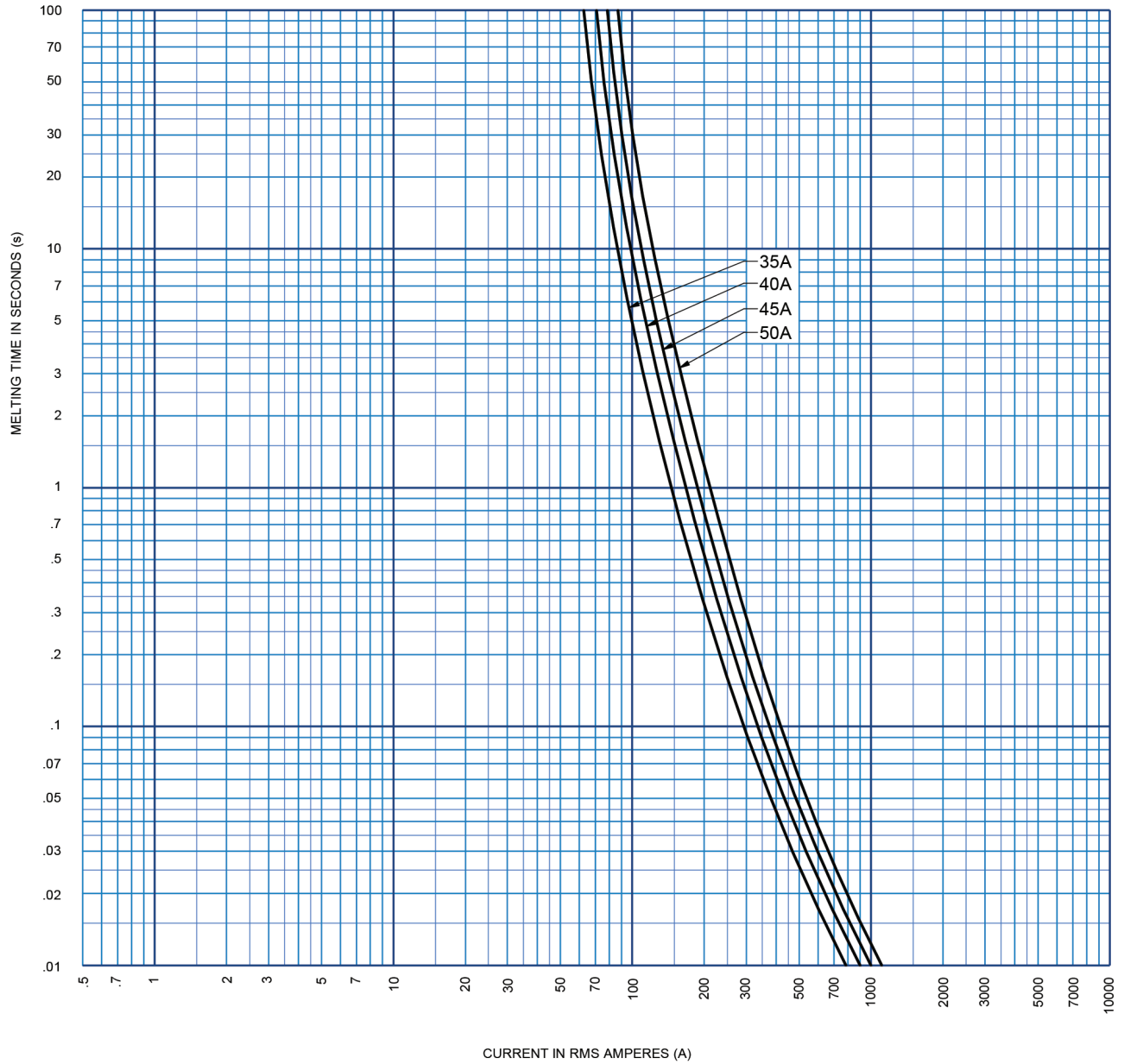
MELTING TIME CURRENT DATA

MDC06A 8-30A



MELTING TIME CURRENT DATA

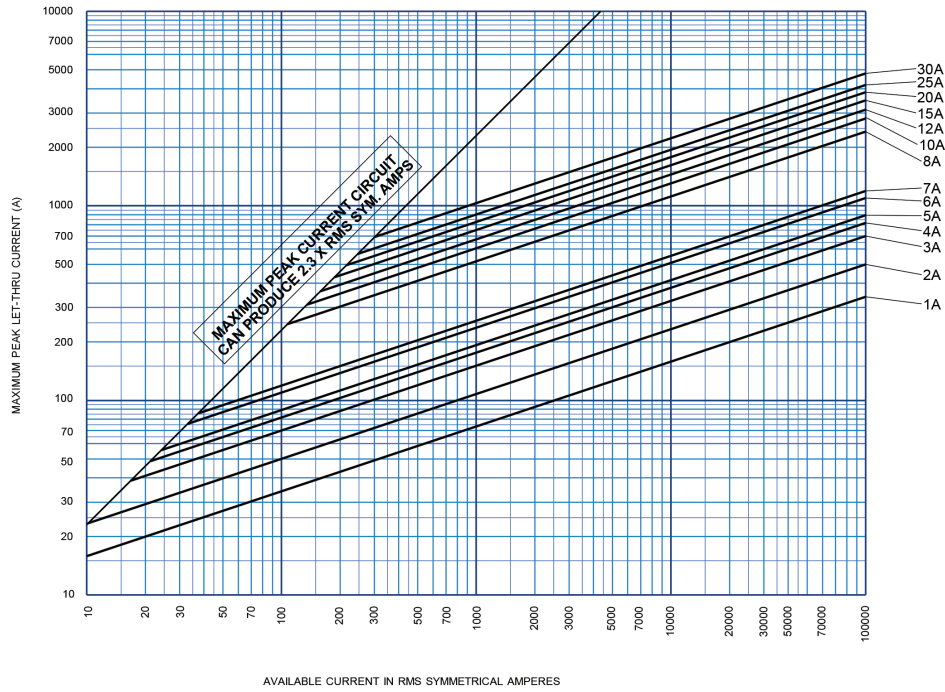
MDC06A 35-50A



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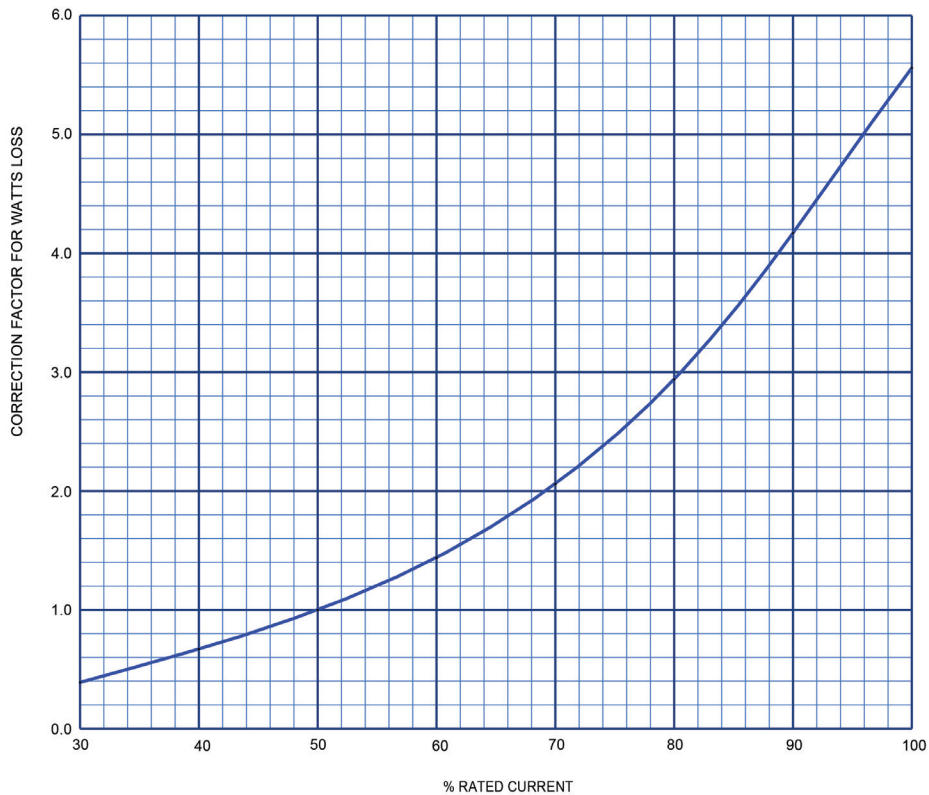
PEAK LET-THRU CURRENT DATA

MDC06A



WATTS LOSS VS RATED CURRENT

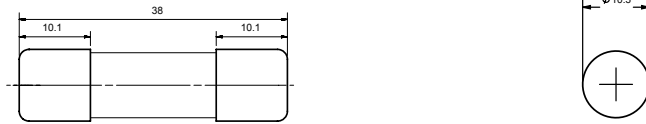
MDC06A 5-50A



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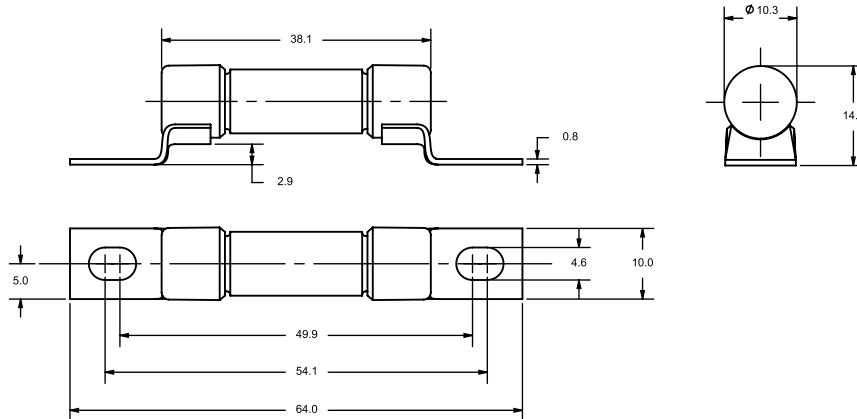
DIMENSIONS:

MDC06A(1-50) Ferrule Fuse



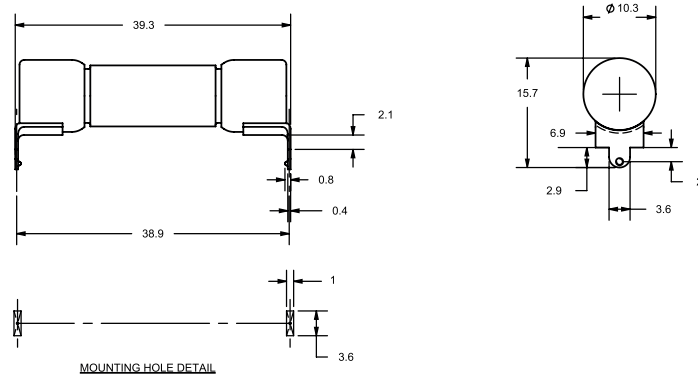
Dimensions in mm

MDC06A(1-50)S Surface Mount Fuse



Dimensions in mm

MDC06A(1-50)P PC Board Mount



Dimensions in mm

Recommended Mounting Torque and Bolt Size

Fuse Type	Mounting Style	Fuse Rating	Thread Size	Tightening Torque	
				N-m	In-lbs
MDC06A	Surface Mount [-S]	1-50A	1/4-20	5.5	50

RECOMMENDED FUSE BLOCKS for midget (10x38mm fuses)

USM and USFM



Number of Poles	Catalog Number			
	UltraSafe™ Indicating Fuse Holder	Screw Connector	Pressure Plate Connector	Copper Box Connector
Adder		30310	30320	30350
1	USM1I	30311	30321	30351
2	USM2I	30312	30322	30352
3	USM3I	30313	30323	30353
3	USFM10I			

USGM



Number of Poles	Catalog Number			
	UltraSafe™ Non-Indicating Fuse Holder	UltraSafe™ Indicating Fuse Holder	UltraSafe™ Photovoltaic Midget Non-Indicating	UltraSafe™ Photovoltaic Midget Indicating
1	USGM1	USGM1I, USGM1I-DC24	USGM1HEL	USGM1IHEL
2	USGM2	USGM2I		
3	USGM3	USGM3I		
4	USGM4	USGM4I		
3 + N	USGM3N	USGM3IN		

RECOMMENDED FUSE CLIPS



C08919P

- Fuse Clips 30A - 13/32" mounting hole: .196" dia. - #10



C08915P

- Fuse Clips 30A - 13/32" mounting hole: .172" dia. - #8



SDC7

- PC Mount Fuse Clips 30A max - 13/32"