

5.5kV E-Rated medium voltage fuses for feeder circuit, switchgear and transformer protection



Description:

Bussmann™ series E-Rated, current-limiting, medium voltage fuses for feeder circuit, switchgear and transformer protection.

Features and benefits

- Current-limiting E-Rated medium voltage fuses are defined by their melting time-current characteristic that permit their electrical interchangeability with other fuses of the same E Rating.
- E-Rated fuses must have a defined current response time specified by ANSI C37.46. E-Rated fuse of 100 amps and below must melt in 300 seconds at an RMS current within the range of 200% to 240% of the fuse's nameplate current rating. E-Rated fuses greater than 100 amps must melt in 600 seconds at an RMS current within the range of 220% to 264% of the fuse's nameplate current rating.
- E-Rated fuses are physically dimensioned for easy installation in existing hardware.
- Current-limiting fuses provide positive interruption even on low fault currents. The fuse limits the magnitude of electromechanical stresses in the protected apparatus.
- Constructions available in ferrule, bolt-on and clip-lock, and specialty mount fuses for AMPGARD motor starters.
- Outdoor rating available on select catalog numbers (requires installation in a suitable enclosure).
- Open fuse indicator speeds troubleshooting by providing a positive visual indication of fuse operation.
- 50/60Hz operating frequency for worldwide application.
- Mountings are available in disconnect and non-disconnect versions with porcelain or glass polyester insulators.
- Live parts and end fittings available.

Typical applications:

- Medium voltage transformer primary protection
- Medium voltage feeder circuit protection
- Medium voltage switches
- Medium voltage metal-enclosed switchgear



Powering Business Worldwide

E-Rated medium voltage ferrule fuses

Catalog symbols:

- General purpose:
 - 5CLE-_E-D (10-25A)
 - 5CLE-_E (10-1350A)
 - 5HLE-_E (10-450A)
 - JCY-_E (1-25A)
- Full range (per ANSI C37.40)
 - MV055F_ (10-450A)

Ratings*:

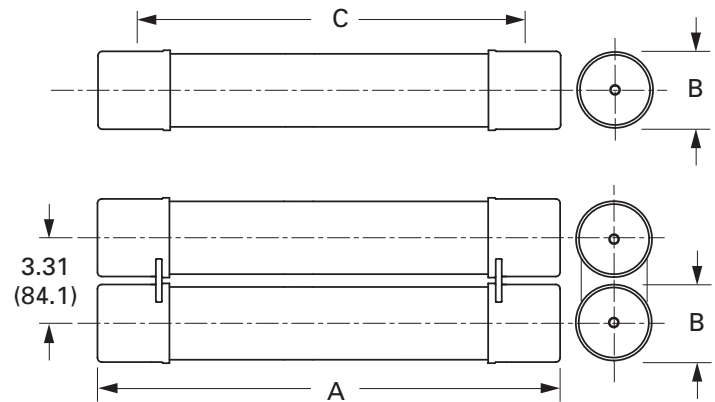
- Volts — 5.5kV
- Amps — 1 to 1350A
- Interrupting ratings — 40 to 65 kA RMS Sym

* See catalog number tables for voltages, ampacities and interrupting ratings by catalog number.

Agency information:

- E-Rated fuses meet the performance characteristics of ANSI C37.46
- UL Listed, Guide JEEG, File E240398. See catalog numbers.

Dimensions (see catalog number tables for values)



Recommended CLE and HLE holders:

						Catalog number			
						Mounting (including live parts, end fittings)**		Live parts (including end fittings)	End fittings (disconnect only)
Amp rating	Fuse mounting type*	Voltage BIL (kV)	Approximate dimensions - in (mm)			Porcelain insulator	Glass-polyester insulator		
			Diameter A	Clip center B	Length C				
CLE									
10E-D-25E-D 30E-250E Single barrel	Non-disconnect	60	3.0 (76.2)	14.0 (355.6)	17.9 (454.7)	5CLE-PNM-D	5CLE-GNM-D	CLE-NL-D	—
	Disconnect†	60				5CLE-PDM-D	5CLE-GDM-D	CLE-DL-D	CLE-DF-D
15E-25E Single barrel	Non-disconnect	60	2.0 (50.8)	11.5 (292.1)	12.9 (327.7)	5CLE-PNM-C	5CLE-GNM-C	CLE-NL-C	—
	Disconnect†	60				5CLE-PDM-C	5CLE-GDM-C	CLE-DL-C	CLE-DF-C
300E-450E Double barrel	Non-disconnect	60	3.0 (76.2)	14.0 (355.6)	17.9 (454.7)	5CLE-PNM-E	5CLE-GNM-E	CLE-NL-E	—
	Disconnect†	60				5CLE-PDM-E	5CLE-GDM-E	CLE-DL-E	CLE-DF-E
600E and 750E Double barrel	Consult factory	60	4.0 (101.6)	N/A	N/A	—	—	—	—
1100E and 1350E Four barrel	Consult factory	—	4.0 (101.6)	N/A	N/A	—	—	—	—
HLE									
10E-D-250E Single barrel	Non-disconnect	60	3.0 (76.2)	12.0 (304.8)	15.9 (403.9)	5HLE-PNM-D	5HLE-GNM-D	CLE-NL-D	—
	Disconnect	60				5HLE-PDM-D	5HLE-GDM-D	CLE-DL-D	CLE-DF-D
300E-450E Double barrel	Non-disconnect	60	3.0 (76.2)	12.0 (304.8)	15.9 (403.9)	5HLE-PNM-E	5HLE-GNM-E	CLE-NL-E	—
	Disconnect	60				5HLE-PDM-E	5HLE-GDM-E	CLE-DL-E	CLE-DF-E

* See page 12 for illustrations and dimensions

** End fittings supplied only when required.

† Disconnect mountings provide a means for fuse extraction only. Do not use a disconnect mounting for load switching or fuse removal while energized.

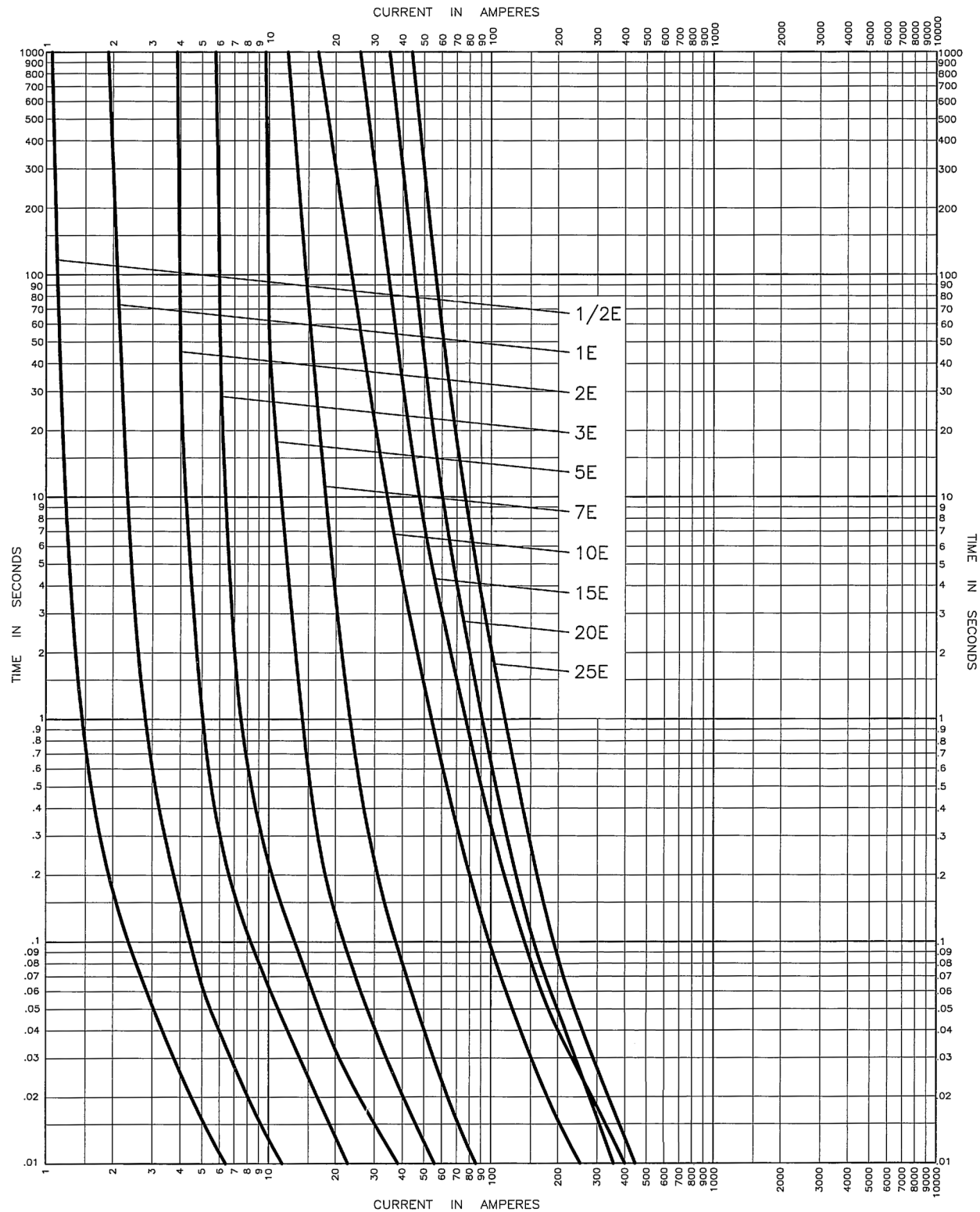
CLE, HLE and JCY general purpose

Dimensions — in (mm)				IR RMS Sym. (kA)	No. of barrels	Installation location	Catalog no.		
Amps	Length A	Diameter B	Clip centers C						
1	11.2 (284)	2 (51)	9 (229)	40	1	Indoor/outdoor	JCY-1E		
2							JCY-2E		
3							JCY-3E		
5							JCY-5E		
7							JCY-7E		
10							JCY-10E		
10	17.9 (455)	3 (76)	14 (356)	63			5CLE-10E-D		
10	15.9 (404)		12 (305)				5HLE-10E		
15	11.2 (284)	2 (51)	9 (229)	40		Indoor	JCY-15E		
15	12.9 (328)		11.5 (292)	50			5CLE-15E*		
15	17.9 (455)	3 (76)	14 (356)	63		Indoor/outdoor	5CLE-15E-D		
15	15.9 (404)		12 (305)				5HLE-15E		
20	11.2 (284)	2 (51)	9 (229)	40		Indoor	JCY-20E		
20	12.9 (328)		11.5 (292)	50			5CLE-20E*		
20	17.9 (455)	3 (76)	14 (356)	63		Indoor/outdoor	5CLE-20E-D		
20	15.9 (404)		12 (305)				5HLE-20E		
25	11.2 (284)	2 (51)	9 (229)	40		Indoor	JCY-25E		
25	12.9 (328)		2 (51) 11.5 (292)	50			5CLE-25E*		
25	17.9 (455)	3 (76)	14 (356)	63		Indoor/outdoor	5CLE-25E-D		
25	15.9 (404)		12 (305)				5HLE-25E		
30	17.9 (455)		14 (356)				5CLE-30E		
30	15.9 (404)		12 (305)				5HLE-30E		
40	17.9 (455)		14 (356)				5CLE-40E†		
40	15.9 (404)		12 (305)				5HLE-40E†		
50	17.9 (455)		14 (356)				5CLE-50E†		
50	15.9 (404)		12 (305)				5HLE-50E†		
65	17.9 (455)		14 (356)				5CLE-65E†		
65	15.9 (404)		12 (305)				5HLE-65E†		
80	17.9 (455)	3 (76)	14 (356)	65		Indoor/outdoor	5CLE-80E†		
80	15.9 (404)		12 (305)				5HLE-80E†		
100	17.9 (455)		14 (356)				5CLE-100E†		
100	15.9 (404)		12 (305)				5HLE-100E†		
125	17.9 (455)		14 (356)				5CLE-125E†		
125	15.9 (404)		12 (305)				5HLE-125E†		
150	17.9 (455)		14 (356)				5CLE-150E†		
150	15.9 (404)		12 (305)				5HLE-150E†		
175	17.9 (455)		14 (356)				5CLE-175E†		
175	15.9 (404)		12 (305)				5HLE-175E†		
200	17.9 (455)	3 (76)	14 (356)	65		Indoor/outdoor	5CLE-200E†		
200	15.9 (404)		12 (305)				5HLE-200E†		
250	17.9 (455)		14 (356)				5CLE-250E†		
250	15.9 (404)		12 (305)				5HLE-250E†		
300	17.9 (455)		14 (356)				5CLE-300E†		
300	15.9 (404)		12 (305)				5HLE-300E†		
350	17.9 (455)		14 (356)				5CLE-350E†		
350	15.9 (404)		12 (305)				5HLE-350E†		
400	17.9 (455)		14 (356)	2			5CLE-400E†		
400	15.9 (404)		12 (305)				5HLE-400E†		
450	17.9 (455)		14 (356)				5CLE-450E†		
450	15.9 (404)		12 (305)				5HLE-450E†		

* Fuses conform to dimensional standards established by Westinghouse.

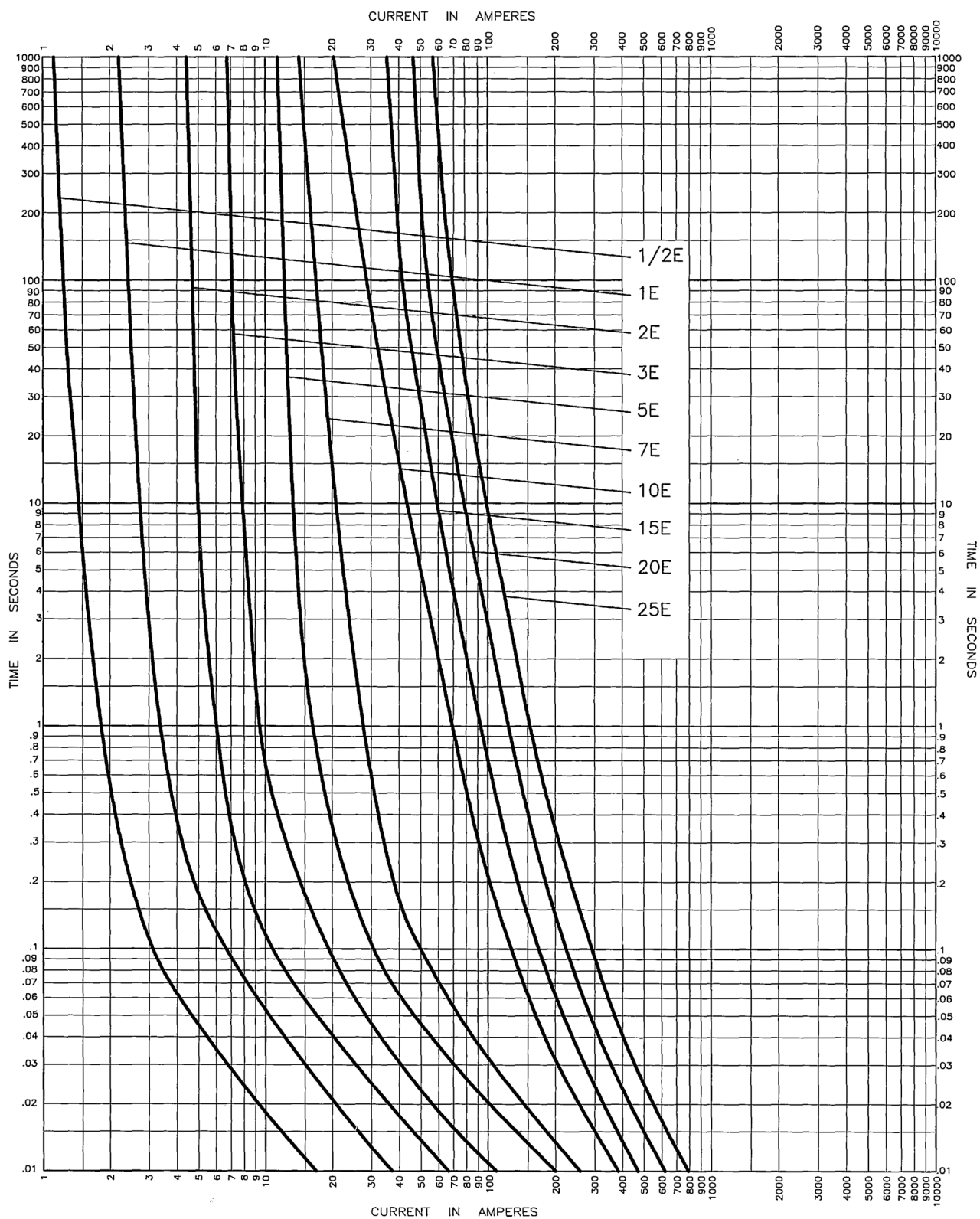
† UL Listed, Guide JEEG, File E240398.

5.5kV Time-current curves — minimum melt for JCY-E fuses



JCY-

5.5kV Time-current curves — total clear for JCY-E fuses



JCY-

MV055 full range

Amps	Dimensions — in (mm)			IR RMS Sym. (kA)	No. of Barrels	Installation location	Catalog no.
	Length A	Diameter B	Clip centers C				
5	15.7 (399)	2 (51)	12 (305)	50	1	Indoor	MV055F1CAX5E
7		2 (51)					MV055F1CAX7E
10		2 (51)					MV055F1CAX10E
10		3 (76)					MV055F1DAX10E
15		2 (51)					MV055F1CAX15E
15		3 (76)					MV055F1DAX15E
20		2 (51)					MV055F1CAX20E
20		3 (76)					MV055F1DAX20E
25		2 (51)					MV055F1CAX25E
25		3 (76)					MV055F1DAX25E
30		2 (51)					MV055F1CAX30E
30		3 (76)					MV055F1DAX30E
40		2 (51)					MV055F1CAX40E
40		3 (76)					MV055F1DAX40E
50		2 (51)					MV055F1CAX50E
50		3 (76)					MV055F1DAX50E
65	3 (76)	2 (51)			2		MV055F1CAX65E
65		2 (51)					MV055F1DAX65E
80		2 (51)					MV055F1DAX80E
100		2 (51)					MV055F1DAX100E
125		2 (51)					MV055F1DAX125E
150		2 (51)					MV055F1DAX150E
175		2 (51)					MV055F1DAX175E
200		2 (51)					MV055F1DAX200E
250		2 (51)					MV055F2DAX250E
300		2 (51)					MV055F2DAX300E
350		2 (51)					MV055F2DAX350E
400		2 (51)					MV055F2DAX400E
450		2 (51)					MV055F2DAX450E

Recommended CLE, HLE and MV055 fuseclips

Description	Fuse diameter - in (mm)	Figure	Clip dimensions - in (mm)							Catalog number
			A	B	C	D	E	F	G	
Enclosed fuseclip	2 (51)	1	3.75 (95)	1.98 (50)	2.01 (51)	1.19 (30)	4.54 (115)	1.51 (38)	0.4 (10)	A3354710*
Enclosed fuseclip	2 (51)		4.14 (105)	2.45 (62)	3.01 (76)	1.19 (30)	5.64 (143)	1.51 (38)	0.4 (10)	A3354730*
Open fuseclip	3 (76)	2	See dimensions drawing							1A0065
Spring loaded open fuseclip	3 (76)	3								9078A67G04

*For single barrel applications only. Not sold in pairs.

Figure 1

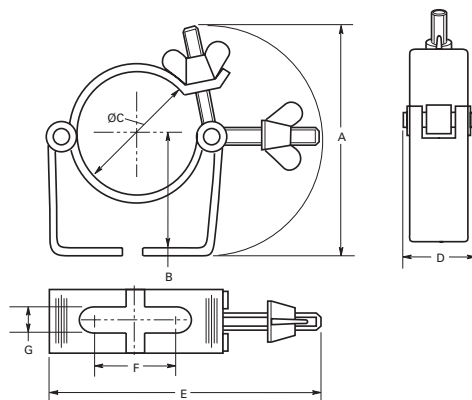


Figure 2

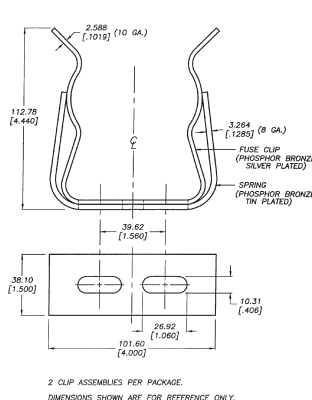
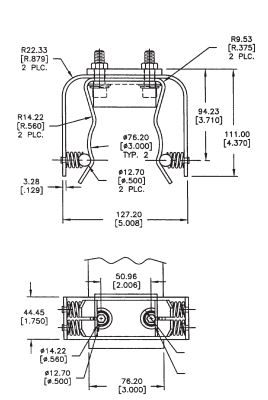
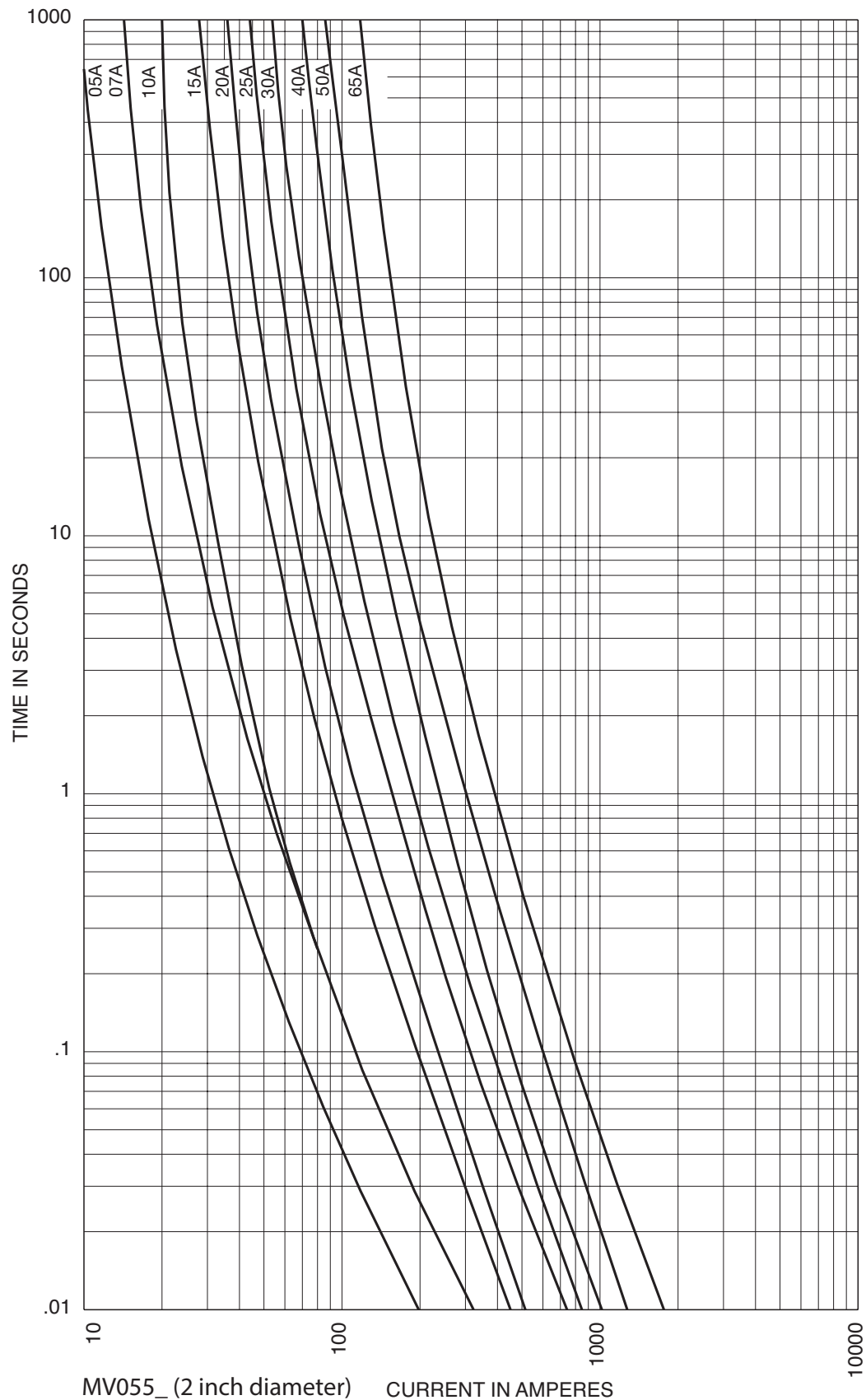


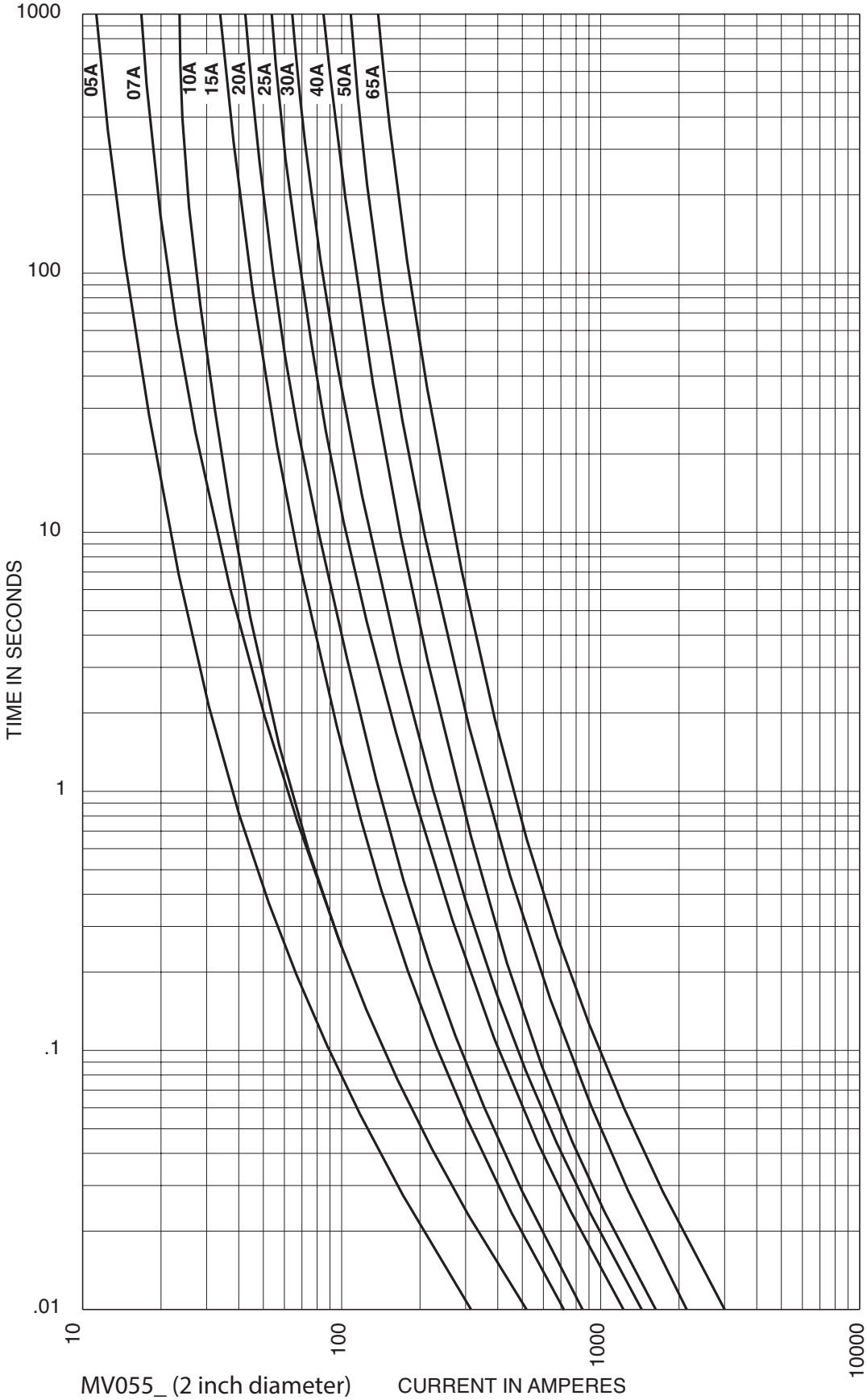
Figure 3



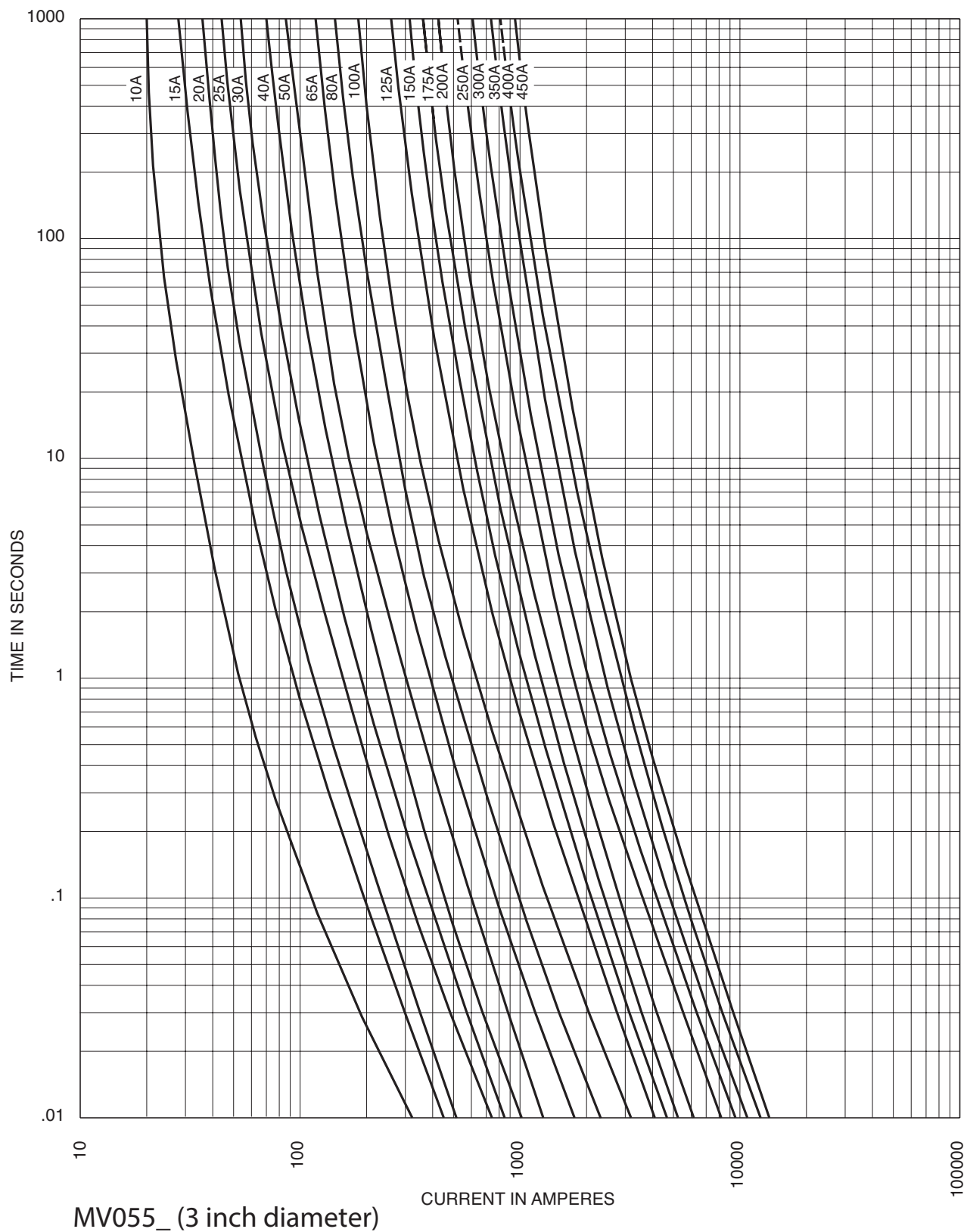
5.5kV Time-current curves — minimum melt for MV055_ 2 inch diameter fuses



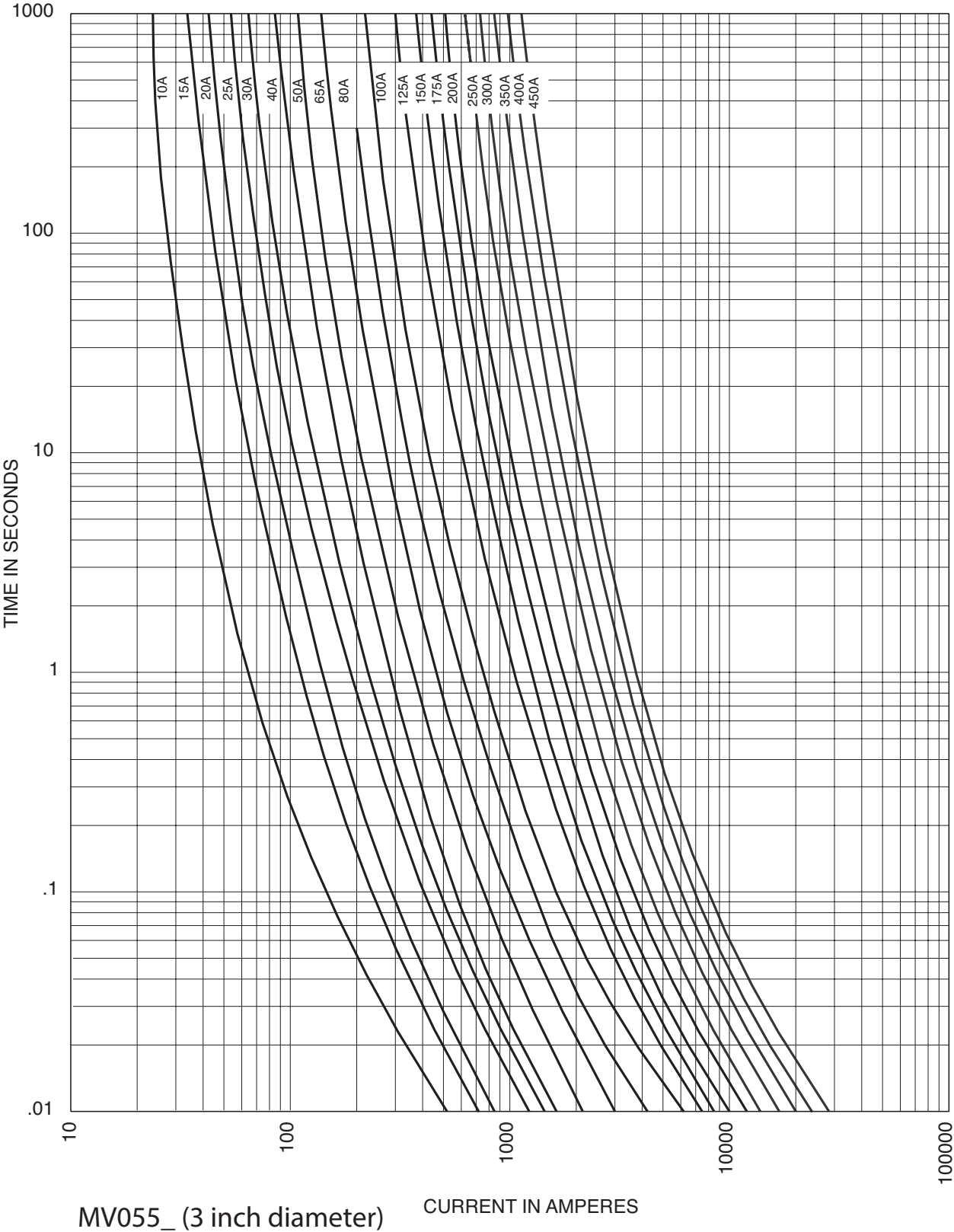
5.5kV Time-current curves — total clear for MV055_ 2 inch diameter fuses



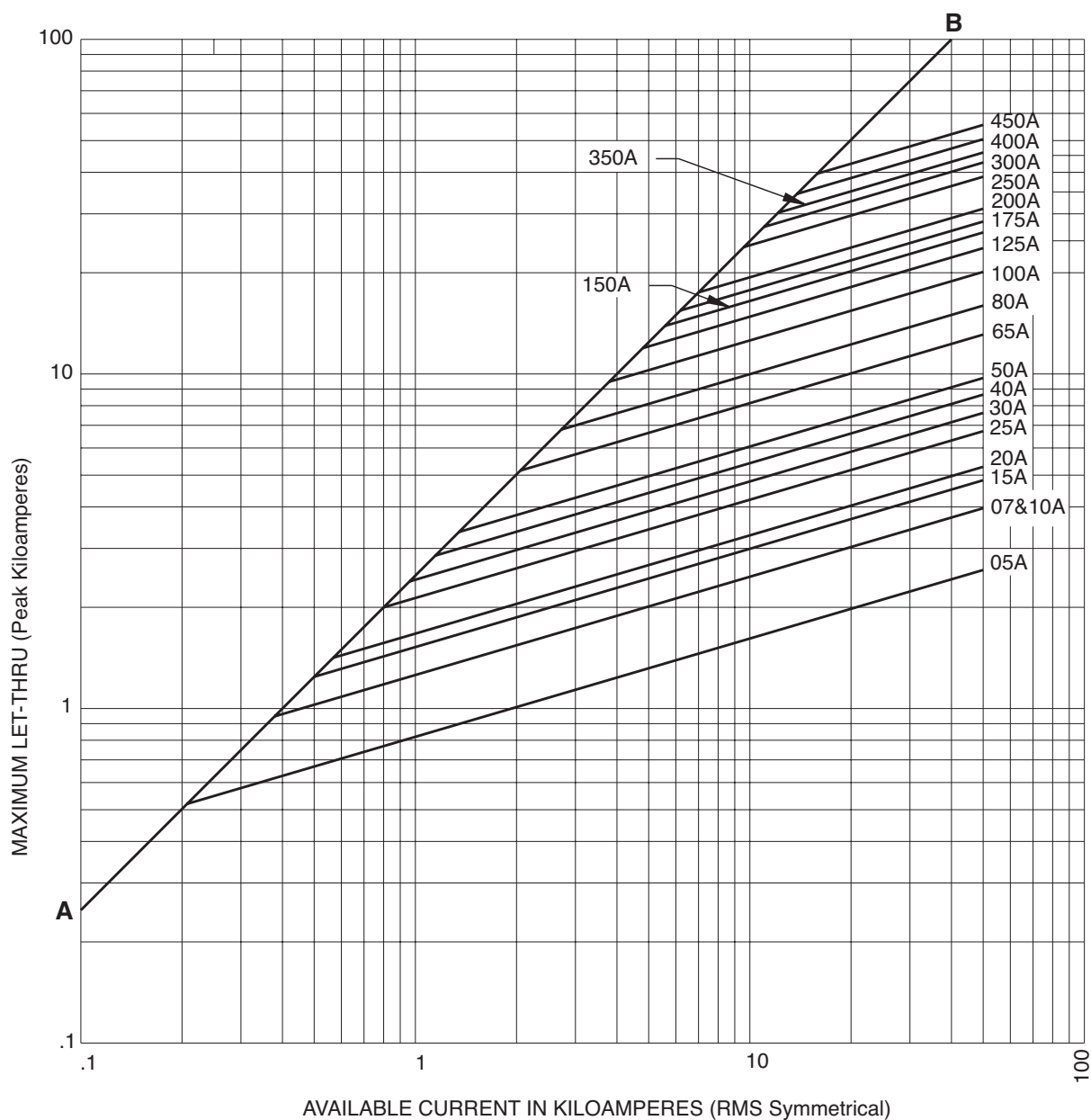
5.5kV Time-current curves — minimum melt for MV055_ 3 inch diameter fuses



5.5kV Time-current curves — total clear for MV055_ 3 inch diameter fuses



5.5kV Peak let-through for MV055_ 2 and 3 inch diameter fuses

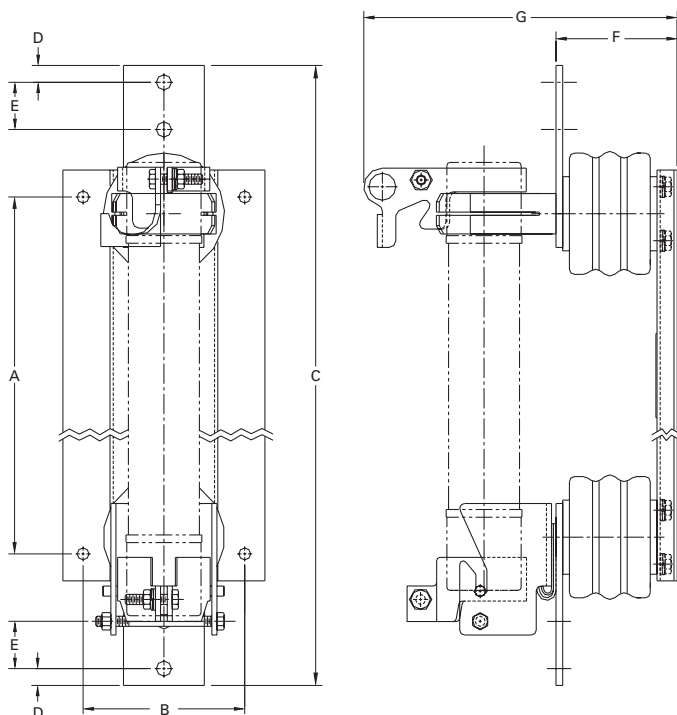


MV055_ (2 and 3 inch diameter)

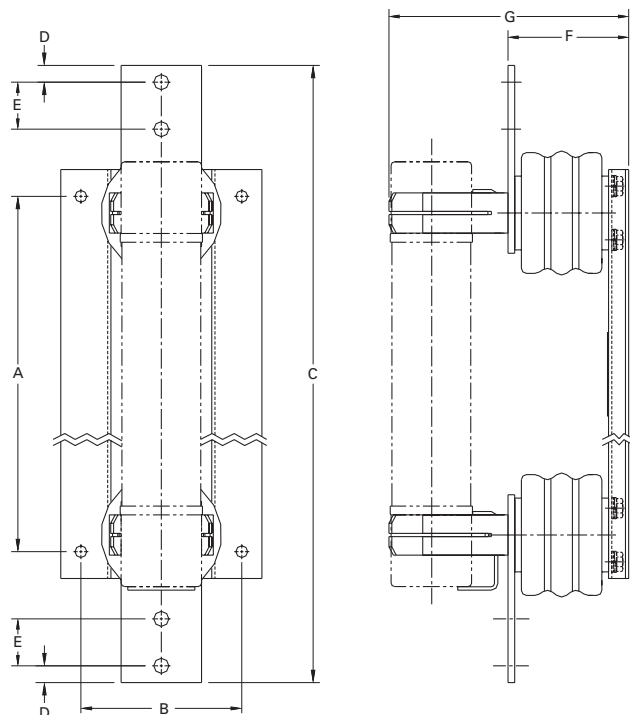
CLE and HLE Type mountings - in (mm)

Catalog number	Hole centers		Overall length	Hole Inset	Hole centers	Contact height	Overall height	BIL kV
	A	B	C	D	E	F	G	
Disconnect single barrel†								
5CLE-GDM-C	12.74 (323.6)	6 (152.4)	25.5 (647.7)	0.75 (19)	1.75 (44.4)	4.5 (114.3)	9.75 (247.6)	60
5CLE-PDM-C	12.74 (323.6)	6 (152.4)	25.5 (647.7)	0.75 (19)	1.75 (44.4)	4.5 (114.3)	9.75 (247.6)	60
5CLE-GDM-D	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	11.72 (297.7)	60
5CLE-PDM-D	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	11.72 (297.7)	60
5HLE-GDM-D	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	11.72 (297.7)	60
5HLE-PDM-D	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	11.72 (297.7)	60
Disconnect double barrel†								
5CLE-GDM-E	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	15.28 (388.1)	60
5CLE-PDM-E	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	15.28 (388.1)	60
5HLE-GDM-E	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	15.28 (388.1)	60
5HLE-PDM-E	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	15.28 (388.1)	60
Non-disconnect single barrel								
5CLE-GNM-C	12.75 (323.8)	6 (152.4)	22 (558.8)	0.75 (19)	1.75 (44.4)	4.5 (114.3)	7.25 (184.1)	60
5CLE-PNM-C	12.75 (323.8)	6 (152.4)	22 (558.8)	0.75 (19)	1.75 (44.4)	4.5 (114.3)	7.25 (184.1)	60
5CLE-GNM-D	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	8.79 (223.3)	60
5CLE-PNM-D	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	8.79 (223.3)	60
5HLE-GNM-D	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	8.79 (223.3)	60
5HLE-PNM-D	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	8.79 (223.3)	60
Non-disconnect double barrel								
5CLE-GNM-E	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.42 (36.1)	4.5 (114.3)	12.48 (317)	60
5CLE-PNM-E	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.42 (36.1)	4.5 (114.3)	12.48 (317)	60
5HLE-GNM-E	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	12.48 (317)	60
5HLE-PNM-E	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	4.5 (114.3)	12.48 (317)	60

CLE and HLE Type disconnect mounting†



CLE and HLE Type non-disconnect mounting



† Disconnect mountings provide a means for fuse extraction only. Do not use a disconnect mounting for load switching or fuse removal while energized.

E-Rated medium voltage specialty mount fuses

Catalog symbols:

- _AHLE-_E (for Eaton AMPGARD motor starting assemblies)
- _BHLE-_E/_BHCL-_E (bolt-on version)
- _HCL-_E (clip-lock version)

Ratings*:

- Volts — 5.5 kV
- Amps — 10 to 900A
- Interrupting ratings — 31 to 65 kA RMS Sym

* See catalog number tables for voltages, ampacities and interrupting ratings by catalog number.

Agency information:

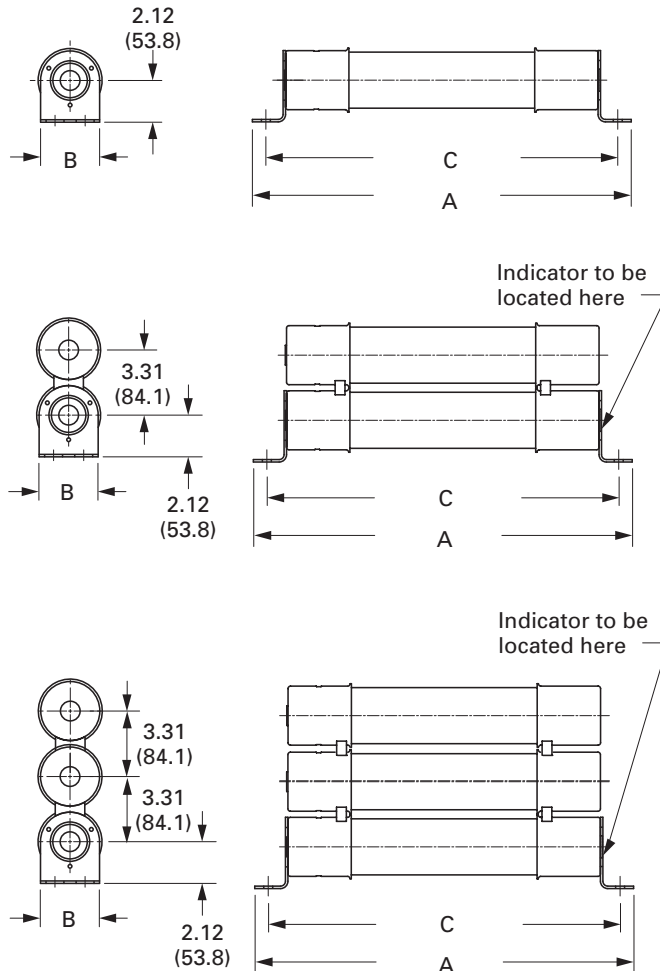
- E-Rated fuses meet the performance characteristics of ANSI C37.46

Recommended live parts for clip-lock fuses

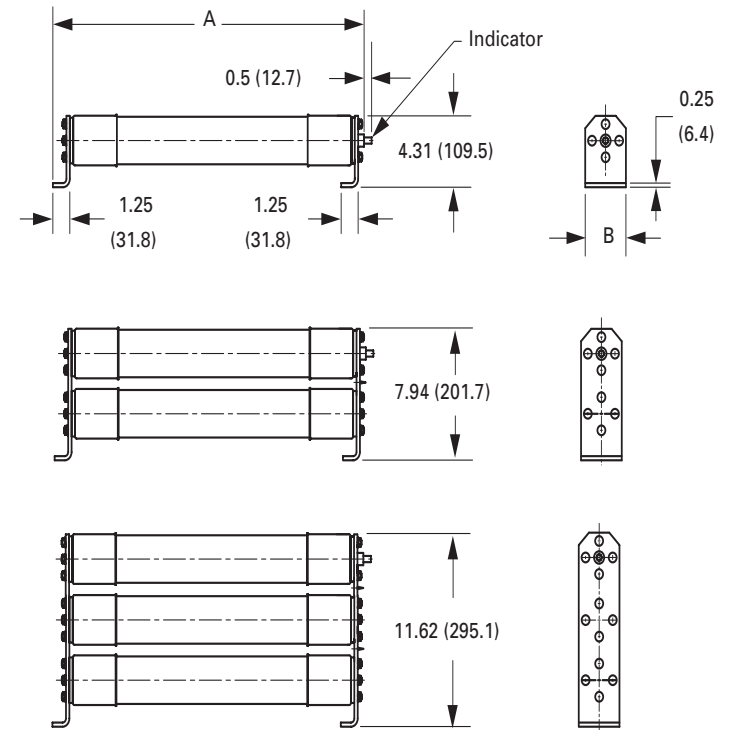
- Catalog number HCL-NL-1

Dimensions - in (mm)

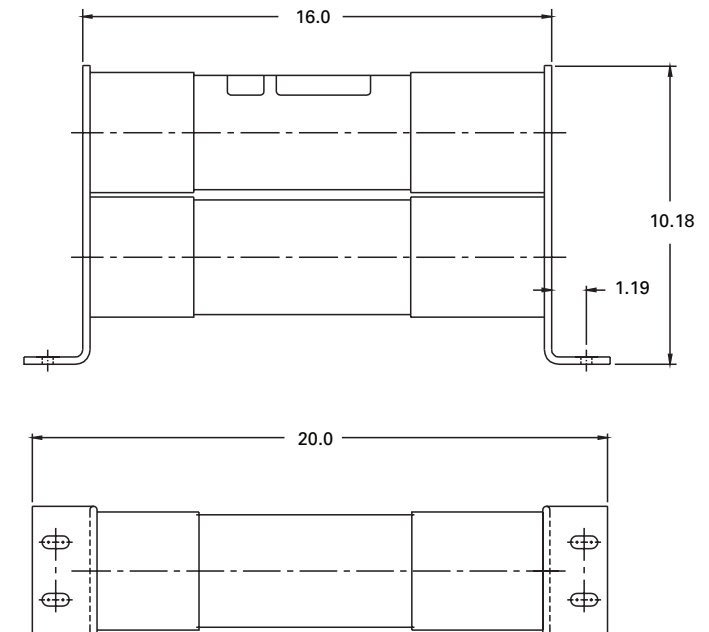
BHLE bolt-on



HCL clip-lock



CLE four barrel bolt-on



Note: 1100E and 1350E fuses require two double barrel fuses (4 total barrels) customer to parallel.

AHLE for Eaton AMPGARD motor starting assemblies

Amps	IR RMS Sym. (kA)	No. of barrels	Catalog no.
10	65	1	5AHLE-10E
15			5AHLE-15E
20			5AHLE-20E
25			5AHLE-25E
30			5AHLE-30E
40			5AHLE-40E†
50			5AHLE-50E†
65			5AHLE-65E†
80			5AHLE-80E†
100			5AHLE-100E†
125			5AHLE-125E†
150			5AHLE-150E†
175			5AHLE-175E†
200			5AHLE-200E†
250			5AHLE-250E†
300		2	5AHLE-300E†
350			5AHLE-350E†
400			5AHLE-400E†
450			5AHLE-450E†

† UL Listed, Guide JEEG, File E240398.

HCL clip-lock versions

Amps	Dimensions — in (mm)			IR RMS Sym. (kA)	No. of barrels	Installation location	Catalog no.
	Length A	Diameter B	Hole centers C				
10	16.8 (427)	3 (76)	N/A	65	1	Indoor	5HCL-10E
15							5HCL-15E
20							5HCL-20E
25							5HCL-25E
30							5HCL-30E
40							5HCL-40E†
50							5HCL-50E†
65							5HCL-65E†
80							5HCL-80E†
100							5HCL-100E†
125	22.8 (579)	3 (76)	N/A	65	2	Indoor	5HCL-125E†
150							5HCL-150E†
200							5HCL-200E†
250							5HCL-250E†
300							5HCL-300E†
400							5HCL-400E†
450							5HCL-450E†
500							5HCL-500E
600							5HCL-600E

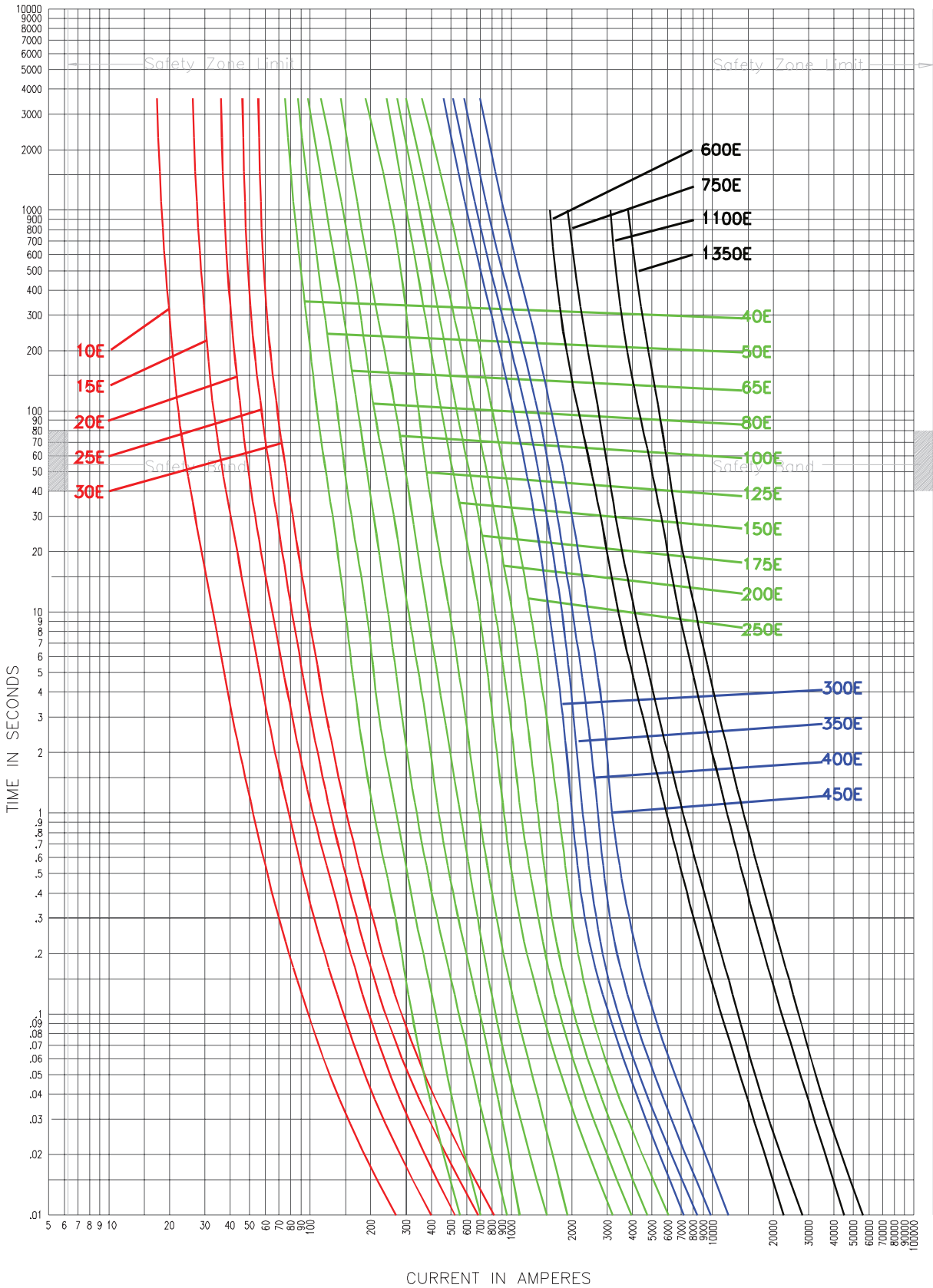
† UL Listed, Guide JEEG, File E240398.

CLE, BHLE and BHCL bolt-on versions

Dimensions — in (mm)				IR RMS Sym. (kA)	No. of barrels	Installation location	Catalog no.
Amps	Length A	Diameter B	Hole centers C				
10	19.2 (488)	3 (76)	17.9 (455)	65	1	Indoor	5BHLE-10E
15							5BHLE-15E
20							5BHLE-20E
25							5BHLE-25E
30							5BHLE-30E
40							5BHLE-40E†
50							5BHLE-50E†
65							5BHLE-65E†
80							5BHLE-80E†
100							5BHLE-100E†
125							5BHLE-125E†
150							5BHLE-150E†
175							5BHLE-175E†
200							5BHLE-200E†
200	25.1 (637)		23.7 (602)				5BHCL-200E
250	19.2 (488)		17.9 (455)				5BHLE-250E†
250	25.1 (637)		23.7 (602)				5BHCL-250E
300	19.2 (488)		17.9 (455)				5BHLE-300E†
300	25.1 (637)		23.7 (602)				5BHCL-300E
350	19.2 (488)		17.9 (455)				5BHLE-350E†
400							5BHLE-400E†
400	25.1 (637)		23.7 (602)		2		5BHCL-400E
450	19.2 (488)		17.9 (455)			5BHLE-450E†	
450							5BHCL-450E
500	25.1 (637)		23.7 (602)				5BHCL-500E
600							5BHCL-600E
600	28.9 (734)	4 (102)	18.4 (467)	40			5CLE-600E
750	25.1 (637)	3 (76)	23.7 (602)	63	3		5BHCL-750E
750	28.9 (734)	4 (102)	18.4 (467)	40	2		5CLE-750E
900	25.1 (637)	3 (76)	23.7 (602)	63	3		5BHCL-900E
1100	19.8 (503)	4 (102)	18.4 (467)	31	4		5CLE-1100E
1350						5CLE-1350E	

† UL Listed, Guide JEEG, File E240398.

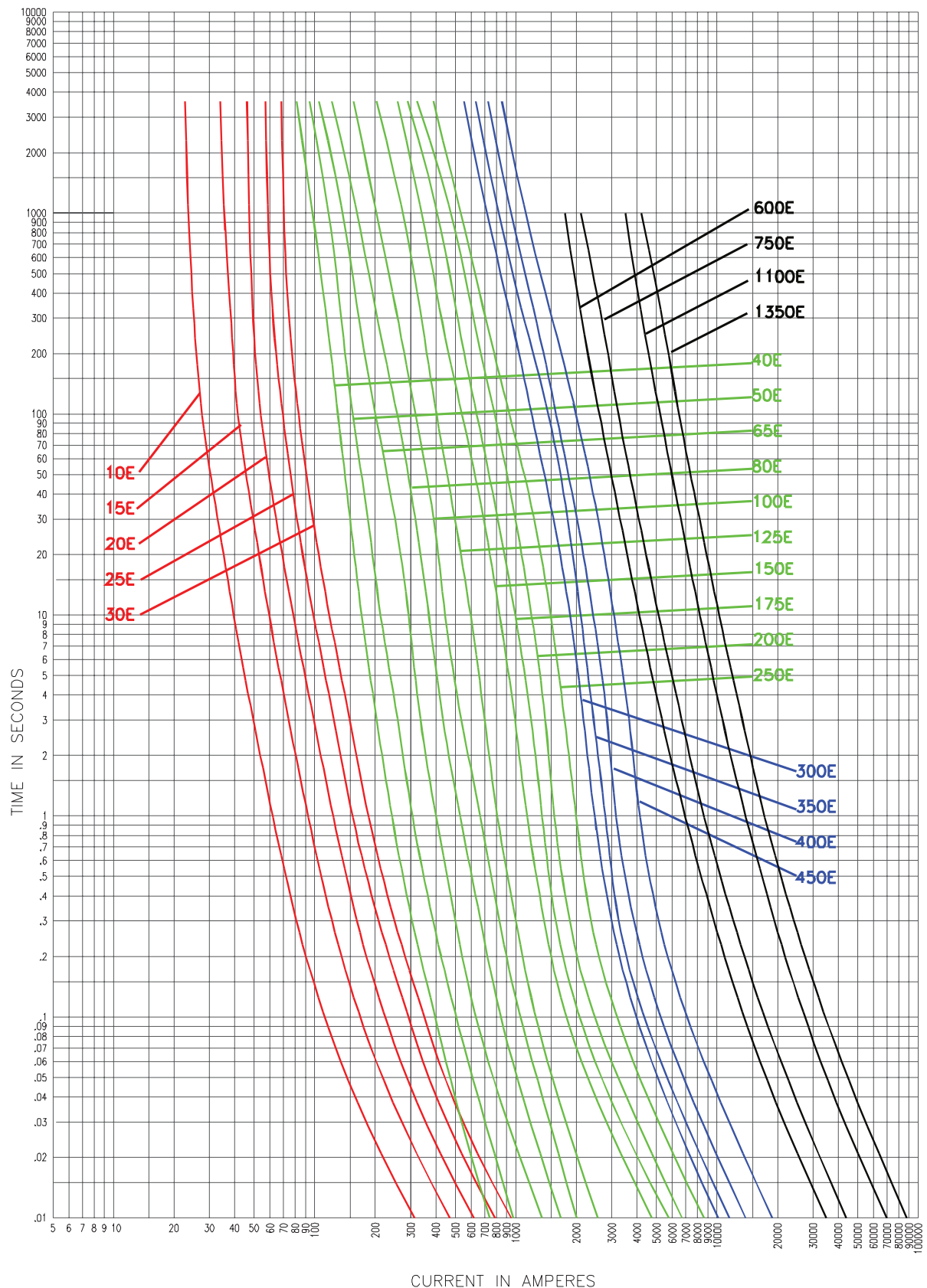
5.5kV Time-current curves — minimum melt for 5CLE- _E and 5CLE- _D



Curve 70548501	Curve 70545801	Curve 70546001	Curve 62908902
April 16, 1999	April 16, 1999	April 20, 1999	April 1999
Reference # 563532	Reference # 705458	Reference # 705460	Reference # 629089

5CLE- _

5.5kV Time-current curves — total clear for 5CLE-_E and 5CLE_-_D



5CLE-_

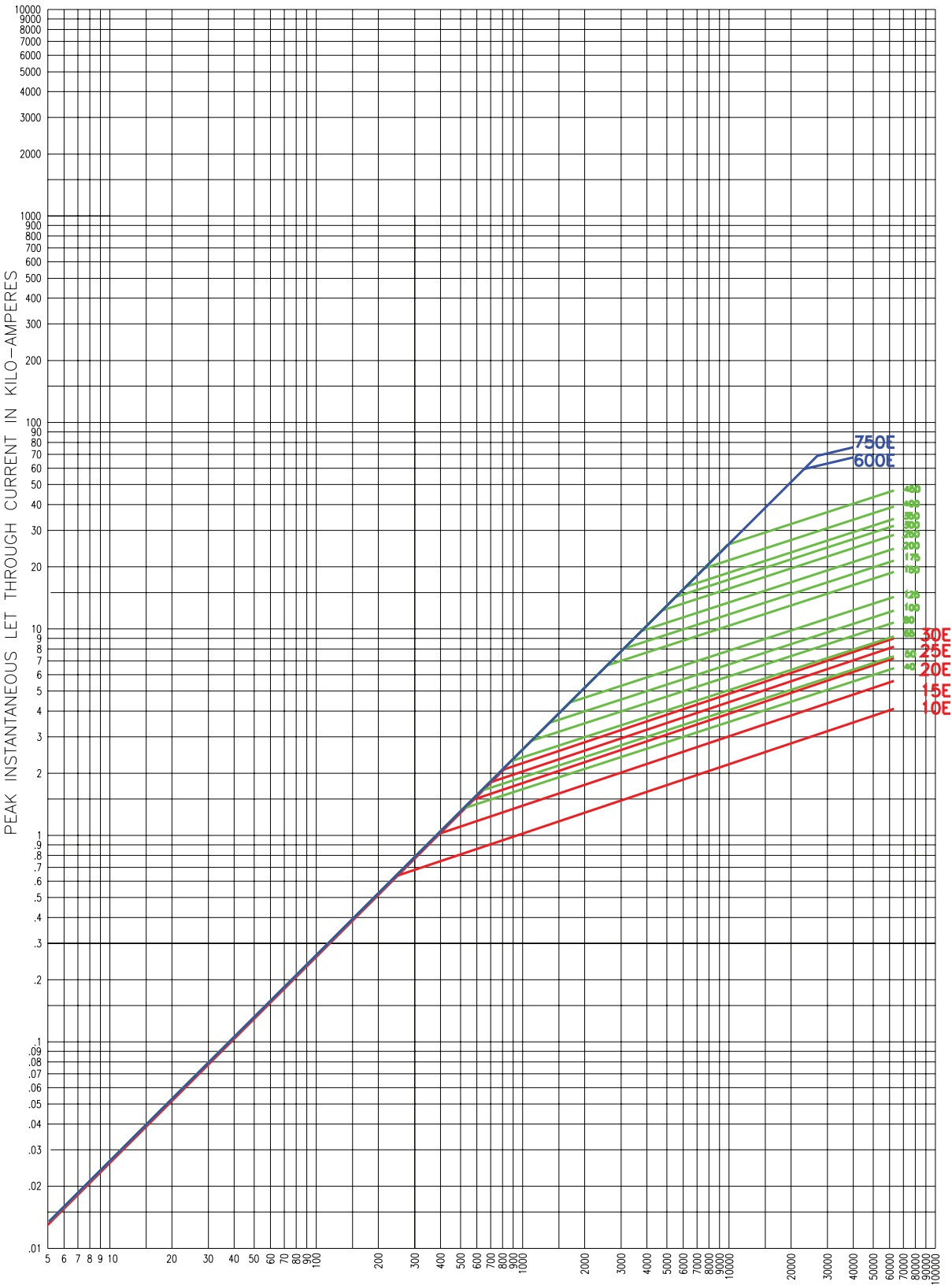
Curve 70548702
April 16, 1999
Reference # 563533

Curve 70545901
April 20, 1999
Reference # 705459

Curve 70546101
April 20, 1999
Reference # 705461

Curve 62908903
April 1999
Reference # 629089

5.5kV Peak let-through for 5CLE- _E and 5CLE- _D



AVAILABLE CURRENT IN AMPERES

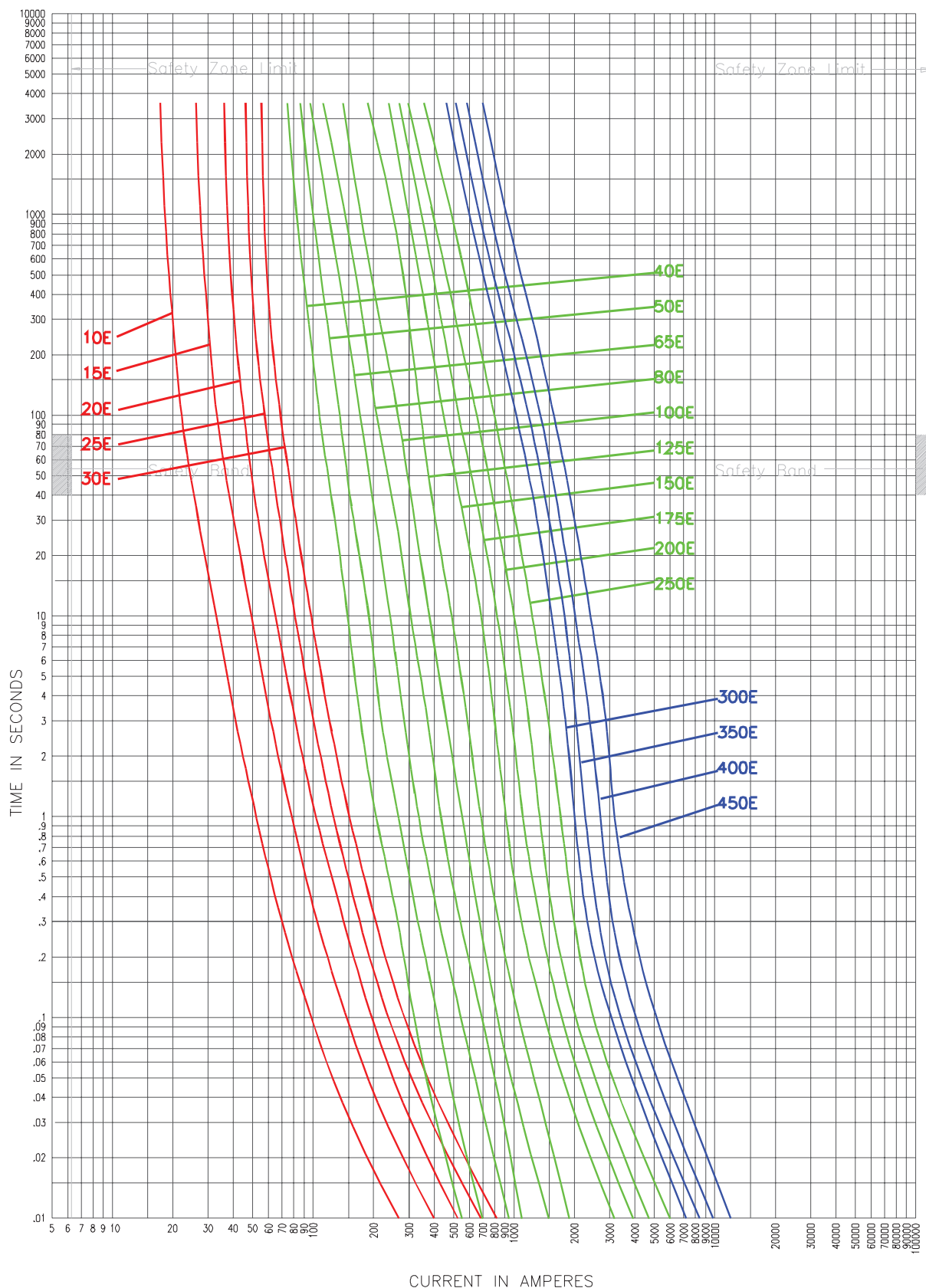
Curve 70548701
April 1999
Reference # 705487

Curve 70547601
April 1999
Reference # 705476

Curve 62908904
April 1999
Reference # 629089

5CLE- _

5.5kV Time-current curves — minimum melt for 5HLE-_E, 5AHLE-_E and 5BHLE-_E



5HLE-_, 5BHLE-_, 5AHLE-_

Curve 70548507

April 16, 1999

Reference # 563532

Curve 70545805

April 16, 1999

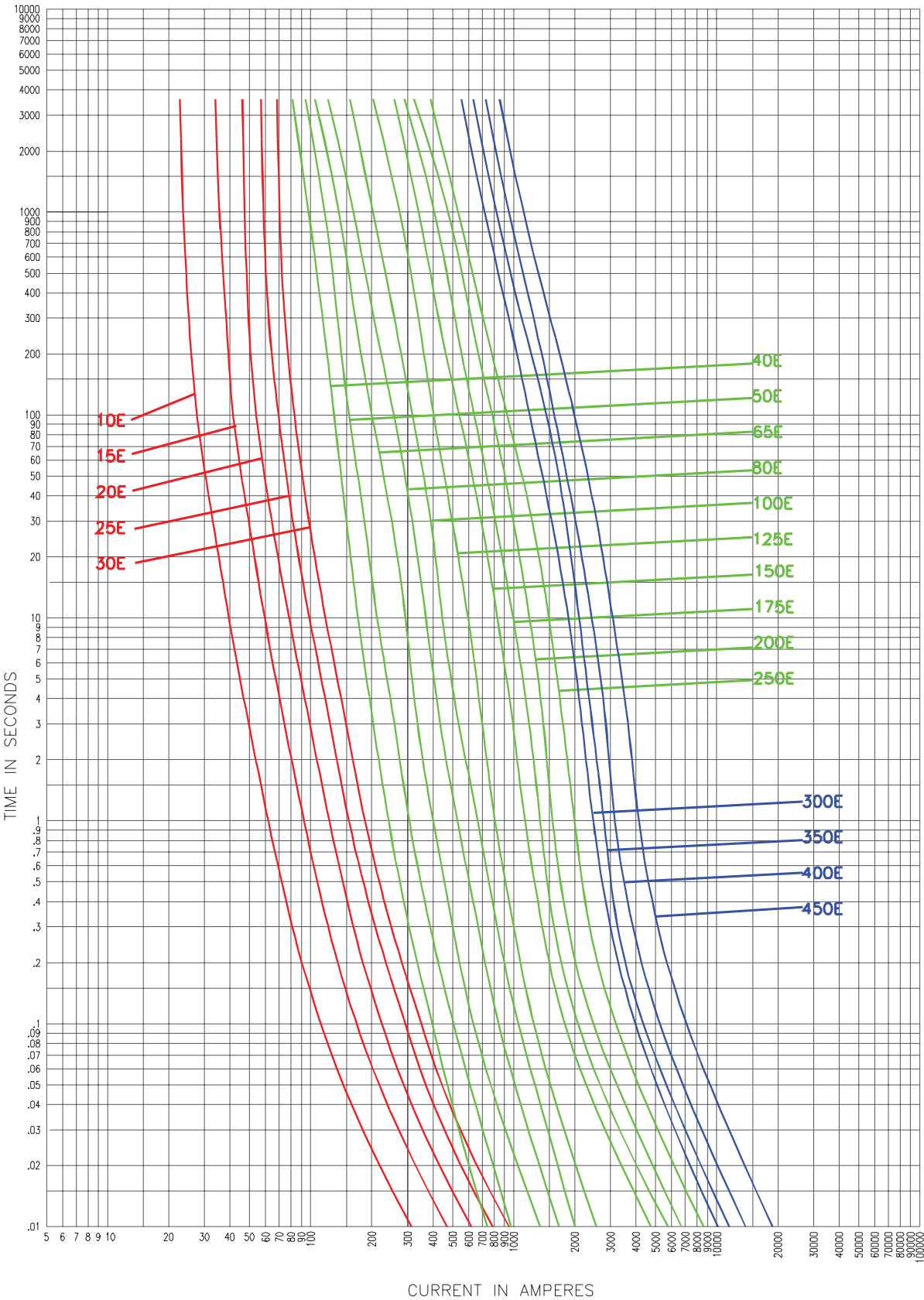
Reference # 705458

Curve 70546005

April 20, 1999

Reference # 705460

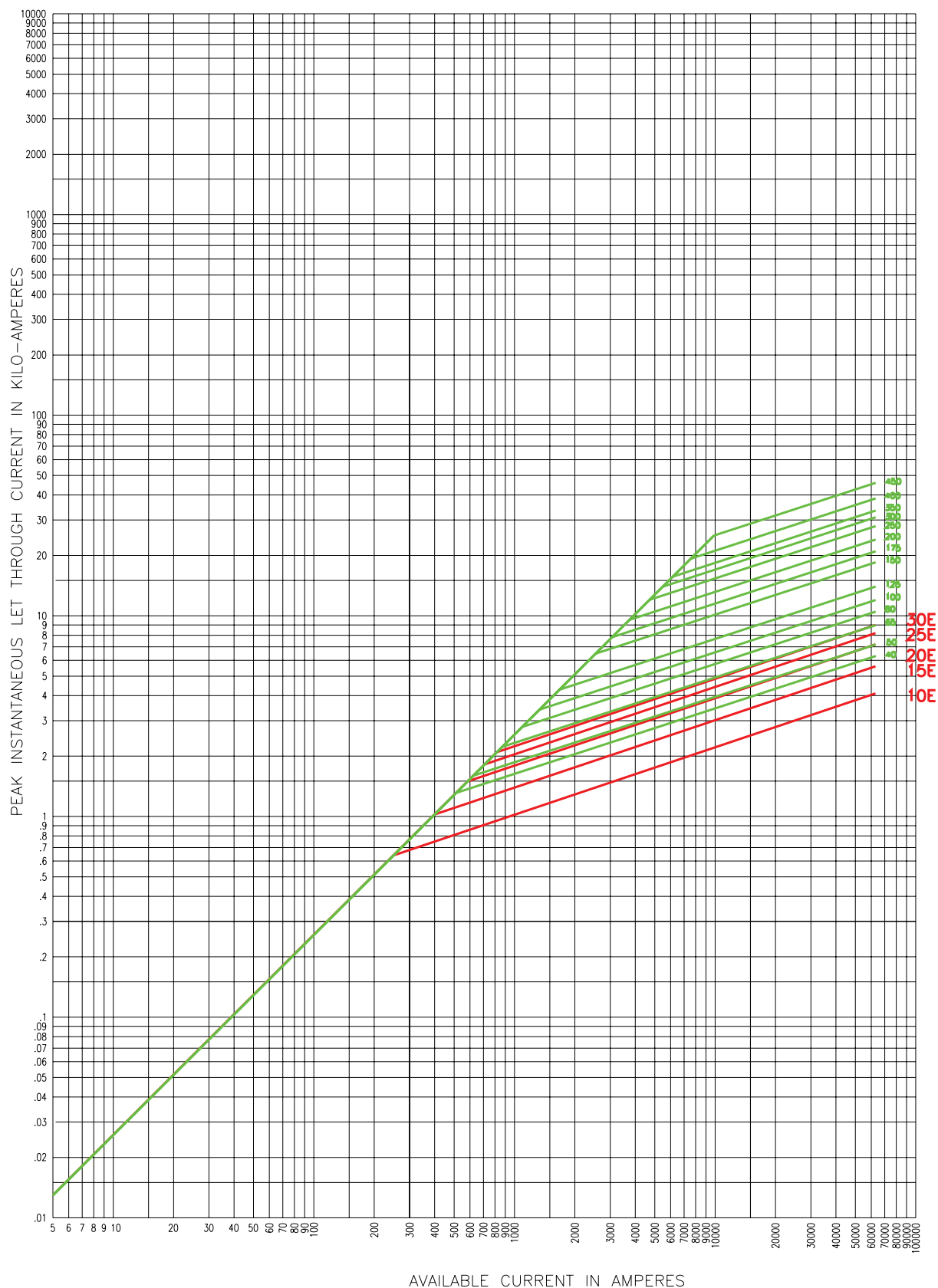
5.5kV Time-current curves — total clear for 5HLE- _E, 5AHLE- _E and 5BHLE- _E



5HLE-_, 5BHLE-_, 5AHLE- _

Curve 70548607	Curve 70545905	Curve 70546105
April 16, 1999	April 20, 1999	April 20, 1999
Reference # 563533	Reference # 705459	Reference # 705461

5.5kV Peak let-through for 5HLE-_E, 5AHLE-_E and 5BHLE-_E

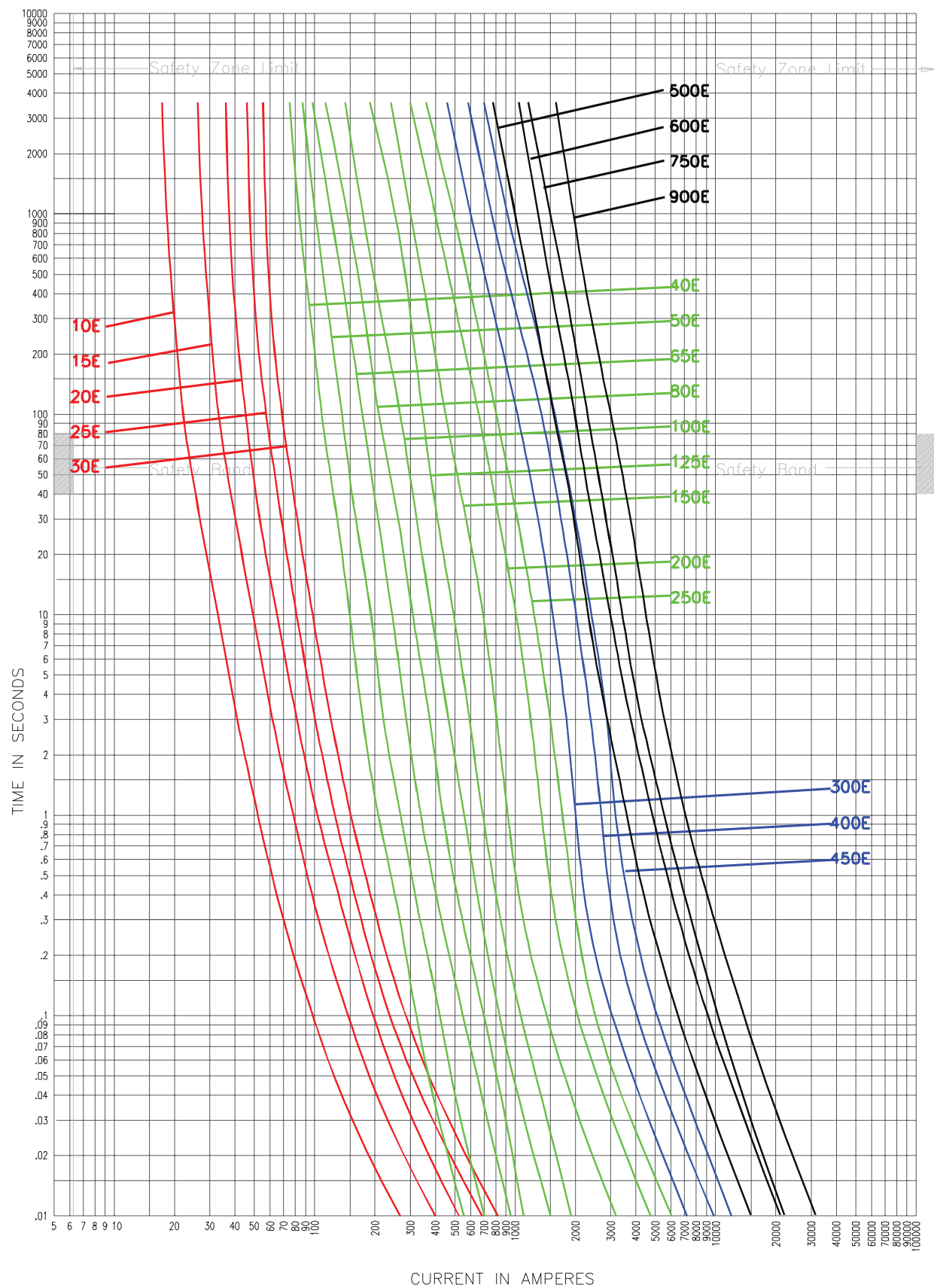


5HLE-_, 5BHLE-_, 5AHLE-_

Curve 70548703
April 1999
Reference # 705487

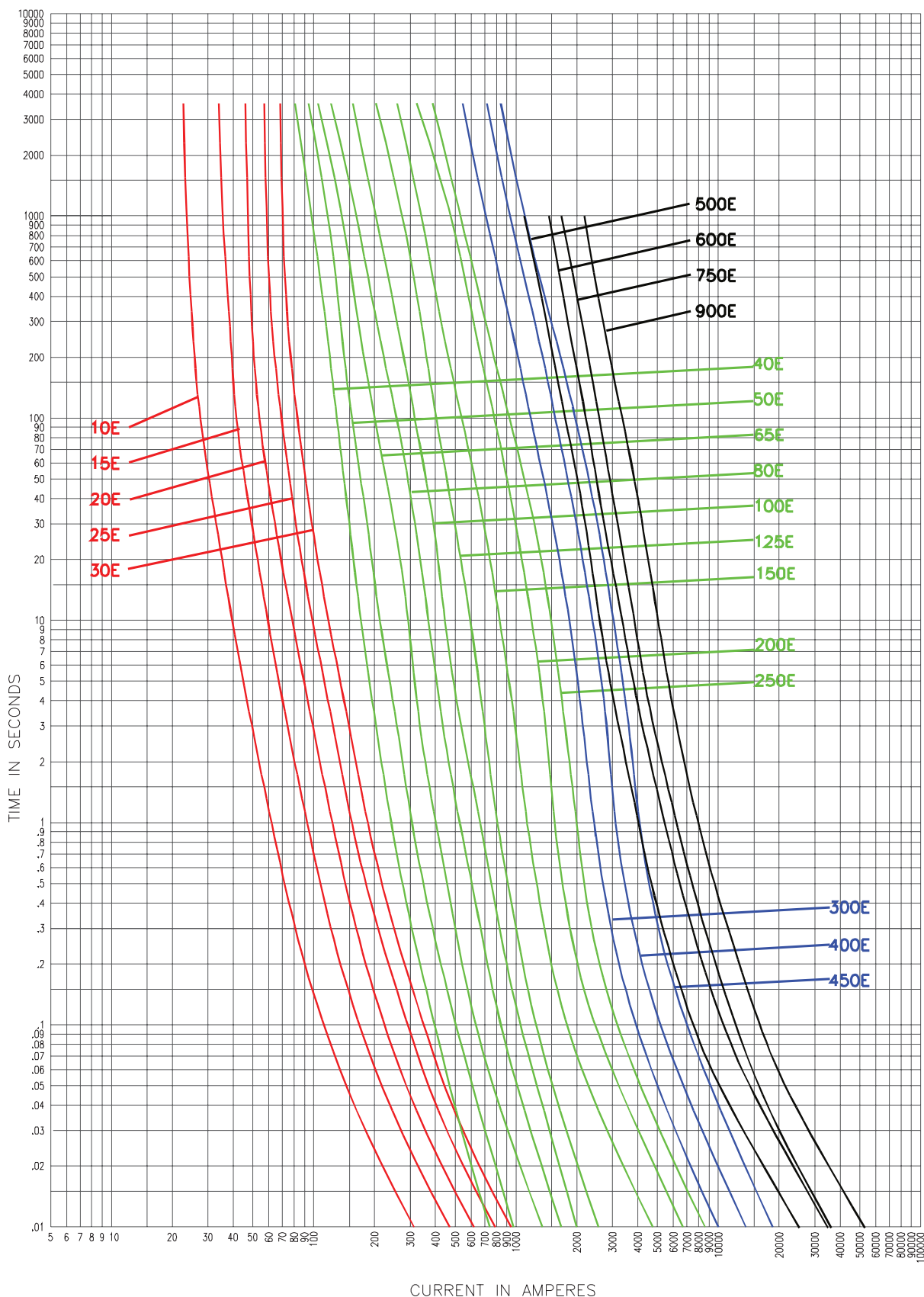
Curve 70547603
April 1999
Reference # 705476

5.5kV Time-current curves — minimum melt for 5HCL_E



5HCL-_
Curve 70548505 Curve 7054803 Curve 70546003 Curve 66703401
Janaury 2001 January 2001 April 2001 Janaury 2001

5.5kV Time-current curves — total clear for 5HCL-E



5HCL-

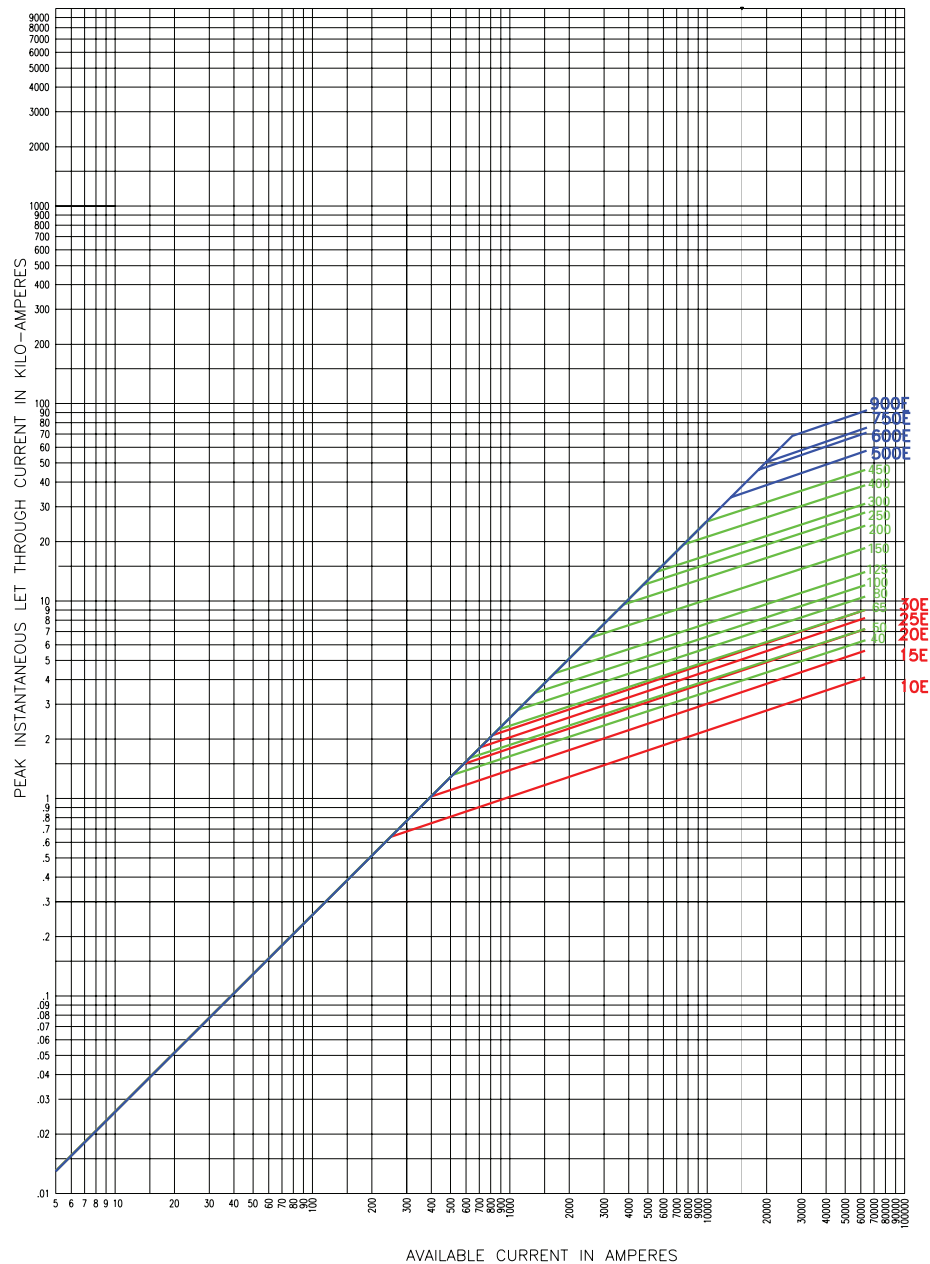
Curve 70548605
Janaury 2001

Curve 70545903
Janaury 2001

Curve 70516103
Janaury 2001

Curve 66703501
Janaury 2001

5.5kV Peak let-through for 5HCL_E



5HCL_

The only controlled copy of this Data Sheet is the electronic read-only version located on the Bussmann Network Drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Bussmann also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
Eaton.com

Bussmann Division
114 Old State Road
Ellisville, MO 63021
United States
Eaton.com/bussmannseries

© 2019 Eaton
All Rights Reserved
Printed in USA
Publication No. 10351
October 2019

Eaton and Bussmann are valuable trademarks of Eaton in the U.S. and other countries. You are not permitted to use the Eaton trademarks without prior written consent of Eaton.

ANSI is a registered trademark of the American National Standards Association
IEEE is a registered trademark of the Institute of Electrical and Electronics Engineers
NEMA is a registered trademark of the National Electrical Mfrs. Association
NFPA is a registered trademark of the National Fire Protection Association
UL is a registered trademark of the Underwriters Laboratories, Inc.