

8.3kV 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 easily integrates into automation schemes and speeds troubleshooting by providing a positive visual indication of fuse operation.
- Optional remote contact signaling microswitch available.
- 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

E-Rated medium voltage ferrule fuses

Catalog symbols:

- 8CLE_E-D (10-25A)
- 8CLE_E (10-350A)
- 8HLE_E (10-350A)

Ratings*:

- Volts — 8.3kV
- Amps — 10 to 350A
- Interrupting ratings — 50kA RMS Sym

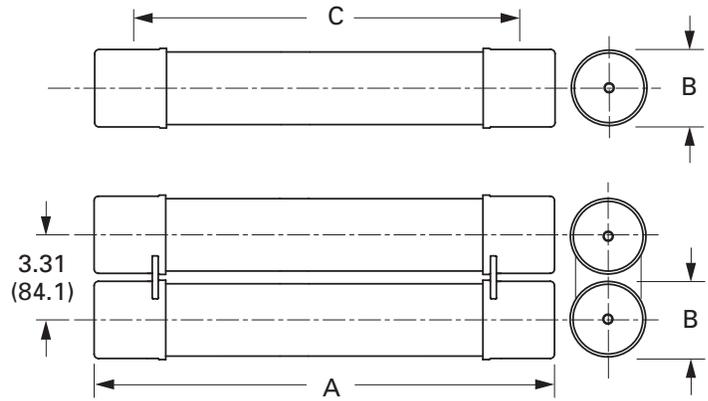
* See catalog number tables for voltages, ampacities and interrupting ratings by catalog number.

Agency information:

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

Recommended fuse holders:

Dimensions (see catalog number tables for values)



Amp rating	Fuse mounting type*	Voltage BIL (kV)	Approximate dimensions - in (mm)			Mounting (including live parts, end fittings)**		Live parts (including end fittings)	End fittings (disconnect only)
			Diameter A	Clip center B	Length C	Porcelain insulator	Glass-polyester insulator		
CLE									
10E-D-25E-D	Non-disconnect	75	3.0 (76)	14 (356)	17.9 (455)	8CLE-PNM-D	8CLE-GNM-D	CLE-NL-D	—
30E-175E	Disconnect†	75				8CLE-PDM-D	8CLE-GDM-D	CLE-DL-D	CLE-DF-D
15E-25E	Non-disconnect	75	2.0 (51)	14 (356)	15.5 (394)	8CLE-PNM-C	8CLE-GNM-C	CLE-NL-C	—
	Disconnect†	75				8CLE-PDM-C	8CLE-GDM-C	CLE-DL-C	CLE-DF-C
200E-350E	Non-disconnect	75	3.0 (76)	14 (356)	17.9 (455)	8CLE-PNM-E	8CLE-GNM-E	CLE-NL-E	—
	Disconnect	75				8CLE-PDM-E	8CLE-GDM-E	CLE-DL-E	CLE-DF-E
HLE									
10E-175E	Non-disconnect	75	3.0 (76)	12 (305)	15.9 (404)	8HLE-PNM-D	8HLE-GNM-D	CLE-NL-D	—
	Disconnect†	75				8HLE-PDM-D	8HLE-GDM-D	CLE-DL-D	CLE-DF-D
200E-350E	Non-disconnect	75	3.0 (76)	12 (305)	15.9 (404)	8HLE-PNM-E	8HLE-GNM-E	CLE-NL-E	—
	Disconnect†	75				8HLE-PDM-E	8HLE-GDM-E	CLE-DL-E	CLE-DF-E

* See page 4 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.

Recommended 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	3 (76)	1	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	See dimensions drawing							9078A67G04

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

Figure 1

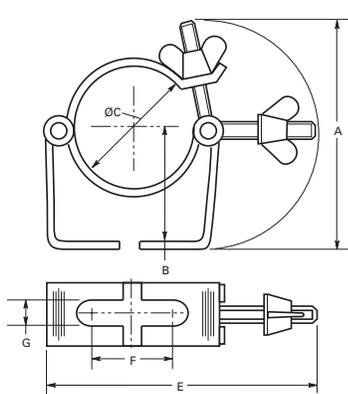


Figure 2

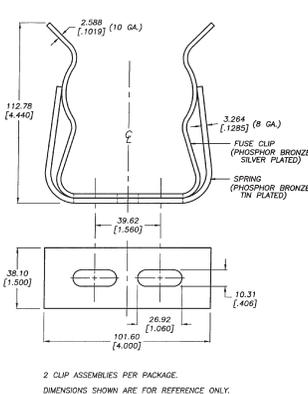
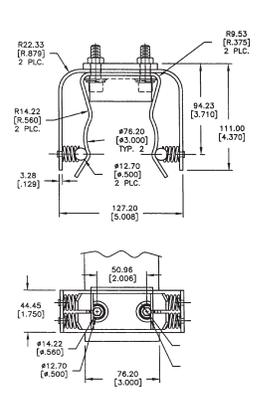


Figure 3



CLE and HLE Type fuses

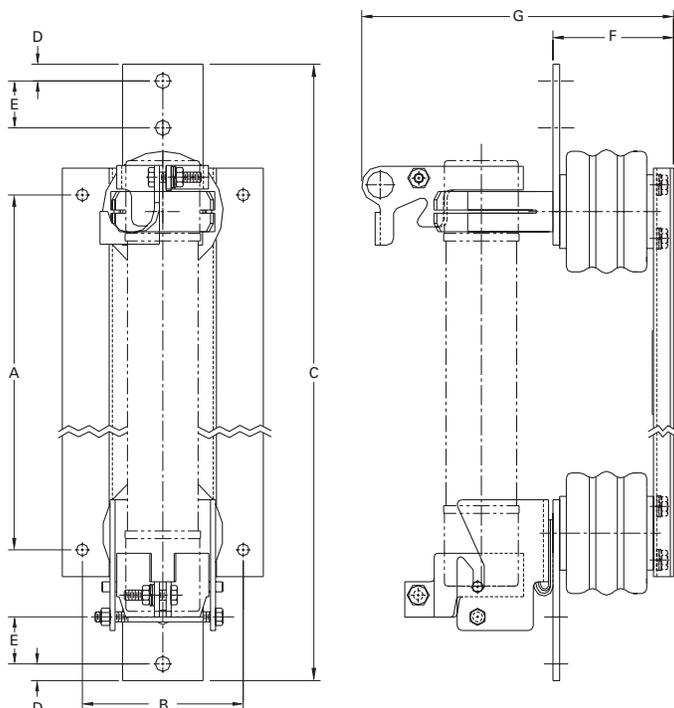
Dimensions — in (mm)						Installation location	Catalog no.
Amps	Length A	Diameter B	Clip centers C	IR RMS Sym. (kA)	No. of barrels		
CLE Long construction (Westinghouse)							
10	17.9 (455)	3 (76)				Indoor/outdoor	8CLE-10E-D
15	15.5 (394)	2 (51)				Indoor	8CLE-15E*
15	17.9 (455)	3 (76)				Indoor/outdoor	8CLE-15E-D
20	15.5 (394)	2 (51)				Indoor	8CLE-20E*
20	17.9 (455)	3 (76)				Indoor/outdoor	8CLE-20E-D
25	15.5 (394)	2 (51)				Indoor	8CLE-25E*
25							8CLE-25E-D
30							8CLE-30E
40							8CLE-40E
50							8CLE-50E
65			14 (356)	50			8CLE-65E
80							8CLE-80E
100	17.9 (455)	3 (76)				Indoor/outdoor	8CLE-100E
125							8CLE-125E
150							8CLE-150E
175							8CLE-175E
200							8CLE-200E
250							8CLE-250E
300							8CLE-300E
350							8CLE-350E
HLE Short construction							
10							8HLE-10E
15							8HLE-15E
20							8HLE-20E
25							8HLE-25E
30							8HLE-30E
40							8HLE-40E
50							8HLE-50E
65							8HLE-65E
80	15.9 (404)	3 (76)	12 (305)	50		Indoor/outdoor	8HLE-80E
100							8HLE-100E
125							8HLE-125E
150							8HLE-150E
175							8HLE-175E
200							8HLE-200E
250							8HLE-250E
300							8HLE-300E
350							8HLE-350E

* Fuses conform to dimensional standards established by Westinghouse.

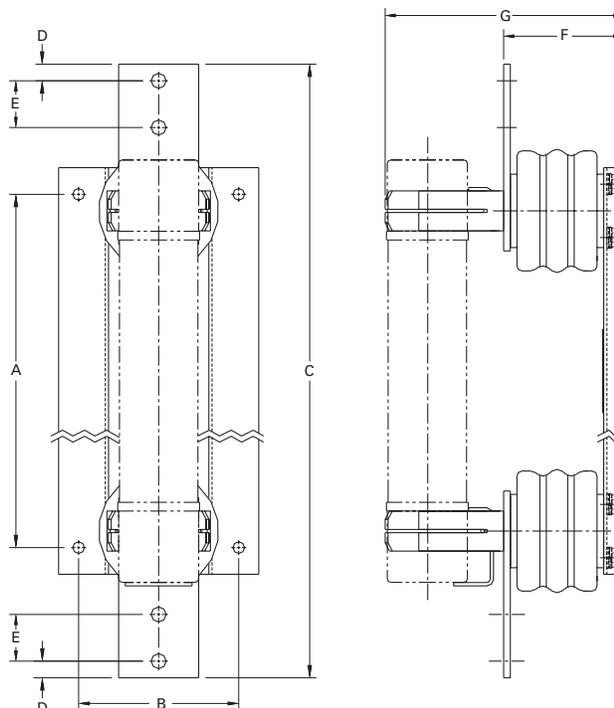
CLE and HLE Type mountings - in (mm)

Catalog number	Hole centers		Overall length C	Hole Inset D	Hole centers E	Contact height F	Overall height G	BIL kV
	A	B						
Disconnect single barrel†								
8CLE-GDM-C	15.24 (387.1)	6 (152.4)	28 (711.2)	0.75 (19)	1.75 (44.4)	7 (177.8)	12.25 (311.1)	75
8CLE-GDM-D	15.24 (387.1)	6 (152.4)	25 (647.7)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	14.22 (361.2)	75
8CLE-PDM-C	15.24 (387.1)	6 (152.4)	28 (711.2)	0.75 (19)	1.75 (44.4)	7 (177.8)	12.25 (311.1)	75
8CLE-PDM-D	15.24 (387.1)	6 (152.4)	25 (647.7)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	14.22 (361.2)	75
8HLE-GDM-D	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	11.72 (297.7)	75
8HLE-PDM-D	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	11.72 (297.7)	75
Disconnect double barrel†								
8CLE-GDM-E	15.24 (387.1)	6 (152.4)	25 (647.7)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	17.78 (451.6)	75
8CLE-PDM-E	15.24 (387.1)	6 (152.4)	25 (647.7)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	17.78 (451.6)	75
8HLE-GDM-E	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	17.78 (451.6)	75
8HLE-PDM-E	16.25 (412.8)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	17.78 (451.6)	75
Non-disconnect single barrel								
8CLE-GNM-C	15.25 (387.3)	6 (152.4)	24.5 (622.3)	0.75 (19)	1.75 (44.4)	7 (177.8)	9.75 (247.6)	75
8CLE-PNM-C	15.25 (387.3)	6 (152.4)	24.5 (622.3)	0.75 (19)	1.75 (44.4)	7 (177.8)	9.75 (247.6)	75
8CLE-GNM-D	15.25 (387.3)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	11.29 (286.7)	75
8CLE-PNM-D	15.25 (387.3)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	11.29 (286.7)	75
8HLE-GNM-D	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	8.79 (223.3)	75
8HLE-PNM-D	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	8.79 (223.3)	75
Non-disconnect double barrel								
8CLE-GNM-E	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	14.98 (380.5)	75
8CLE-PNM-E	15.24 (387.1)	6 (152.4)	25 (635)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	14.98 (380.5)	75
8HLE-GNM-E	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	14.98 (380.5)	75
8HLE-PNM-E	16.25 (412.7)	6 (152.4)	23 (584.2)	0.62 (15.7)	1.75 (44.4)	7 (177.8)	14.98 (380.5)	75

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:

- 8AHLE-_E (special dimension fuses for use with 7.2kV rated, 800 amp AMPGARD motor starting assemblies)
- 8BHLE-_E (bolt-on version)
- 8HCL-_E (clip-lock version)

Ratings*:

- Volts — 8.3kV
- Amps — 10 to 350A
- Interrupting ratings — 50kA RMS Sym

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

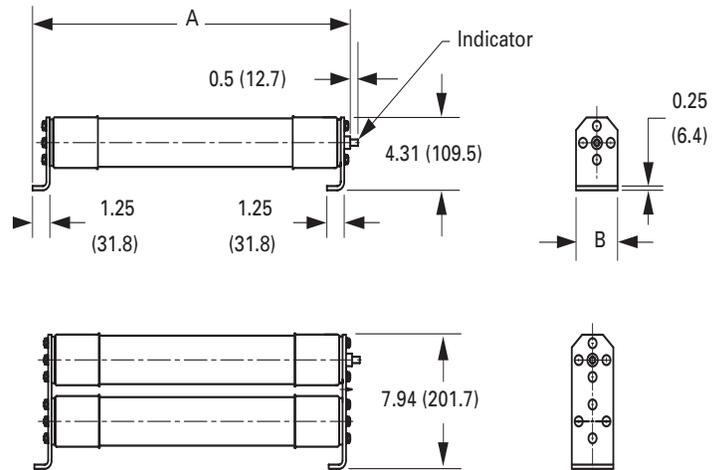
Agency information:

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

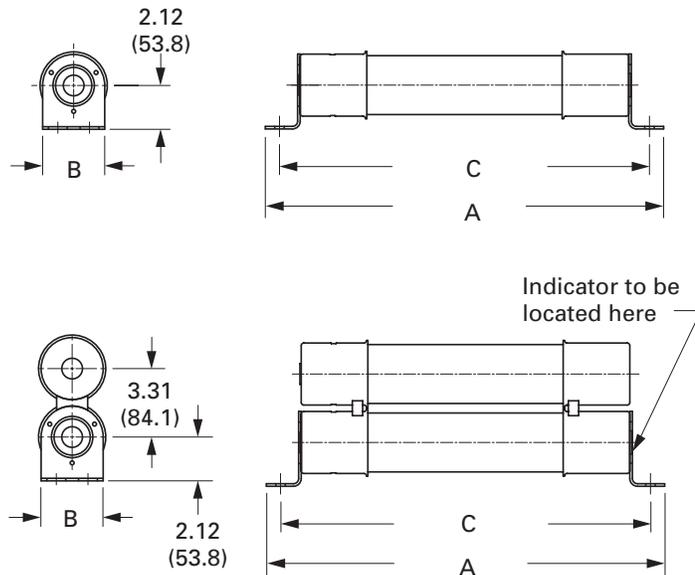
Recommended live parts for clip-lock fuses

- Catalog number HCL-NL-1

Dimensions for HCL - in (mm)



Dimensions for BHLE - in (mm)



AHLE Type fuses

Special dimension fuses for use with 7.2 kV rated, 800 amp AMPGARD motor starting assemblies.

Amps	IR RMS Sym. (kA)	No. of barrels	Catalog no.	
10	50	1	8AHLE-10E	
15			8AHLE-15E	
20			8AHLE-20E	
25			8AHLE-25E	
30			8AHLE-30E	
40			8AHLE-40E	
50			8AHLE-50E	
65			8AHLE-65E	
80			8AHLE-80E	
100			8AHLE-100E	
125			8AHLE-125E	
150			8AHLE-150E	
175			8AHLE-175E	
200			8AHLE-200E	
250			2	8AHLE-250E
300			8AHLE-300E	
350			8AHLE-350E	

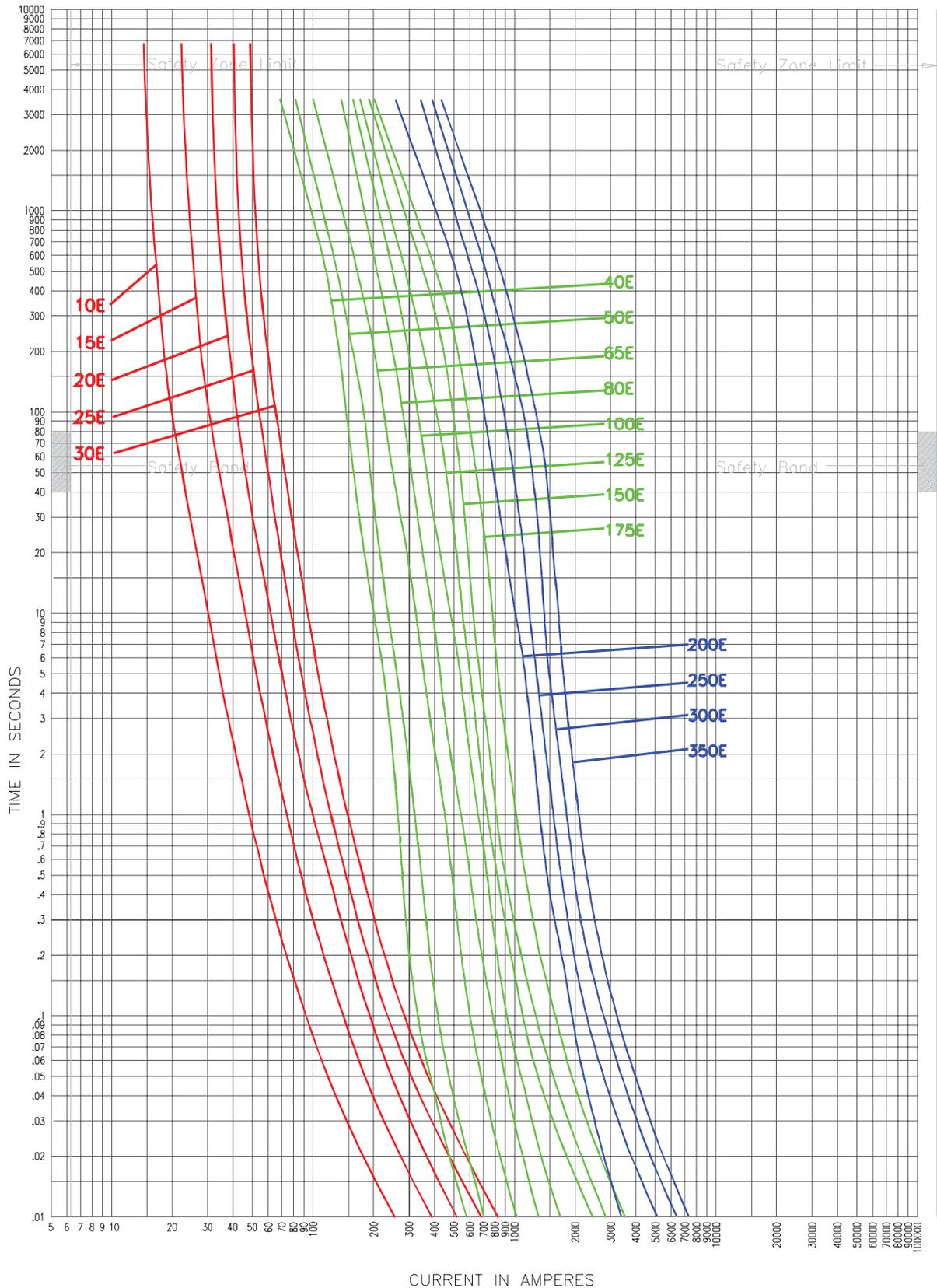
BHLE bolt-on versions

Amps	Dimensions — in (mm)			IR RMS Sym. (kA)	No. of barrels	Installation location	Catalog no.	
	Overall length	Diameter	Hole centers					
10	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-10E	
15							8BHLE-15E	
20							8BHLE-20E	
25							8BHLE-25E	
30							8BHLE-30E	
40							8BHLE-40E	
50							8BHLE-50E	
65							8BHLE-65E	
80							8BHLE-80E	
100							8BHLE-100E	
125							8BHLE-125E	
150							8BHLE-150E	
175							8BHLE-175E	
200							8BHLE-200E	
250							2	8BHLE-250E
300							8BHLE-300E	
350							8BHLE-350E	

HCL Clip lock versions

Amps	Dimensions — in (mm)			IR RMS Sym. (kA)	No. of barrels	Installation location	Catalog no.	
	Overall length	Diameter	Hole centers					
65	22.5 (571.5)	3 (76.2)	N/A	50	1	Indoor/outdoor	8HCL-65E	
80							8HCL-80E	
100							8HCL-100E	
125							8HCL-125E	
150							8HCL-150E	
175							8HCL-175E	
200							8HCL-200E	
250							2	8HCL-250E
300							8HCL-300E	
350							8HCL-350E	

8.3kV Time-current curves — minimum melt for 8CLE- _E and 8CLE- _D



CURRENT IN AMPERES

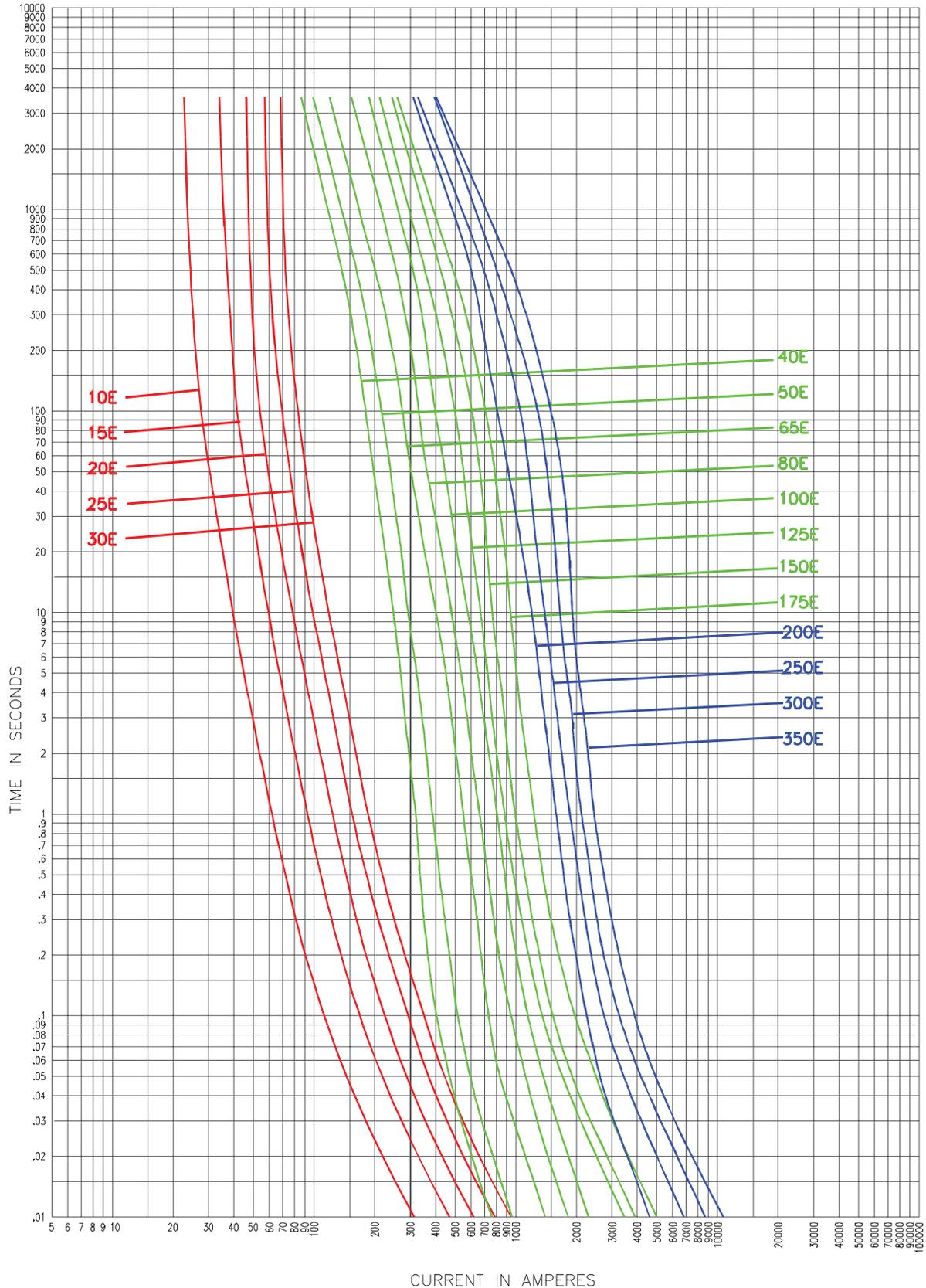
Curve 70548501
April 16, 1999
Reference # 563532

Curve 70546201
April 1999
Reference # 705462

Curve 70546401
April 1999
Reference # 705464

8CLE- _

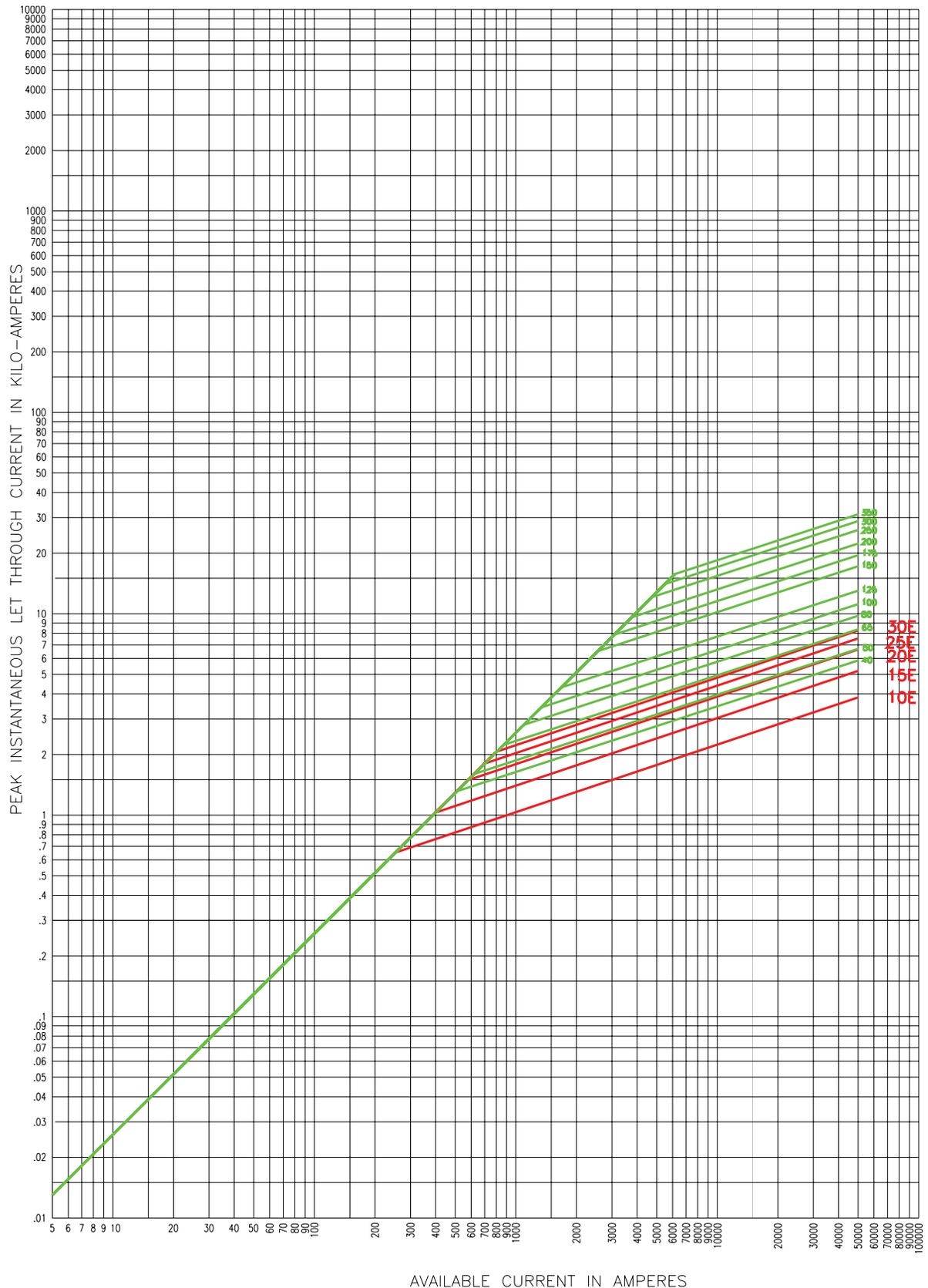
8.3kV Time-current curves — total clear for 8CLE-E and 8CLE-D



Curve 70548601	Curve 70546301	Curve 70546501
April 16, 1999	April 1999	April 1999
Reference # 563533	Reference # 705463	Reference # 705465

8CLE-

8.3kV Peak let-through for 8CLE-_E and 8CLE-_-D

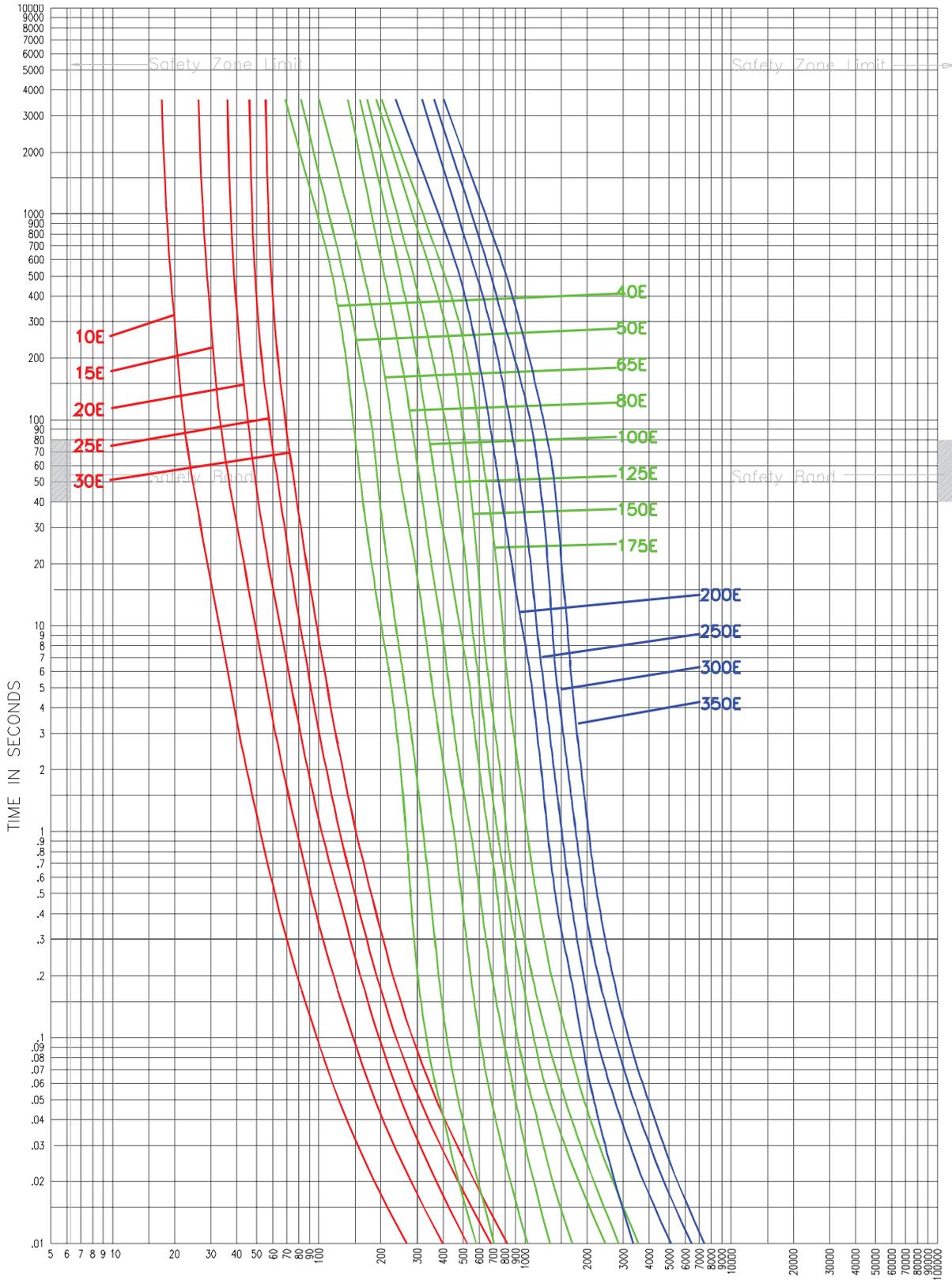


8CLE-_

Curve 70548801
September 1999
Reference # 705488

Curve 70547301
April 1999
Reference # 705473

8.3kV Time-current curves — minimum melt for 8HLE-_E, 8AHLE-_E and 8BHLE-_E



CURRENT IN AMPERES

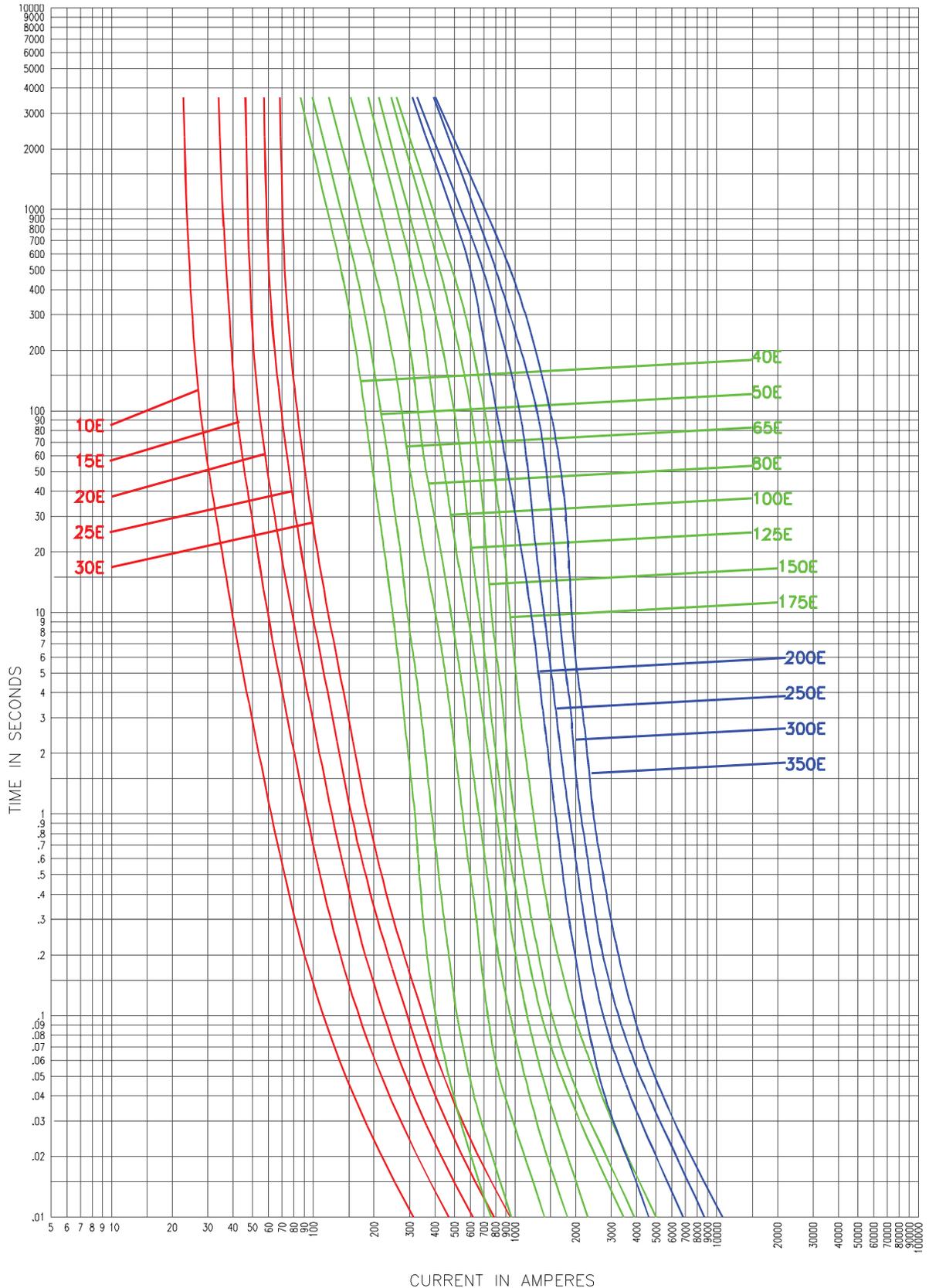
Curve 70548507
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Reference # 563532

Curve 70546203
April 1999
Reference # 705462

Curve 70546403
April 1999
Reference # 705464

8HLE-_E, 8BHLE-_E, 8AHLE-_E

8.3kV Time-current curves — total clear for 8HLE-_E, 8AHLE-_E and 8BHLE-_E



8HLE-_E, 8BHLE-_E, 8AHLE-_E

CURRENT IN AMPERES

Curve 70548607

April 16, 1999

Reference # 563533

Curve 70546303

April 1999

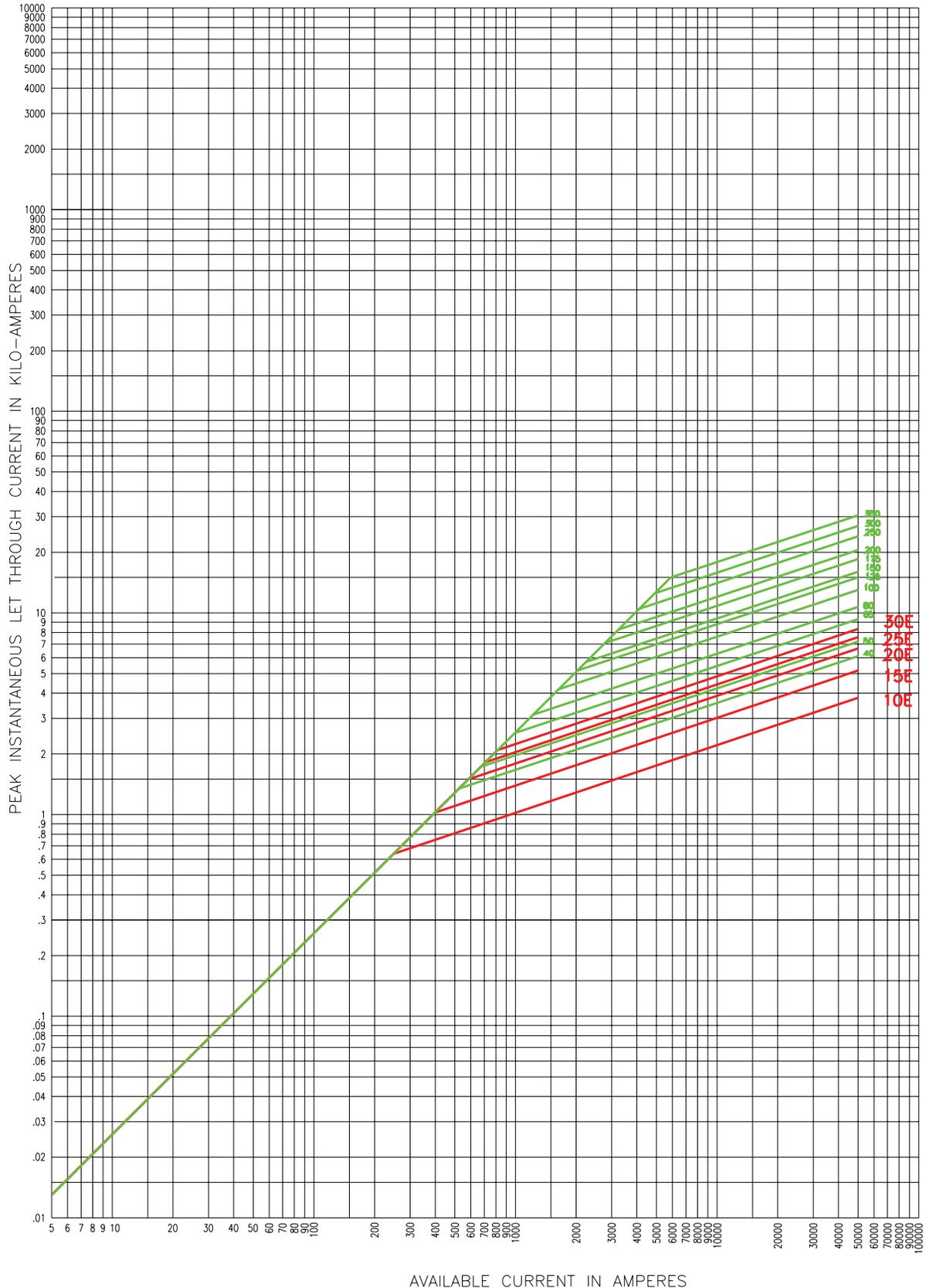
Reference # 705463

Curve 70546503

April 1999

Reference # 705465

8.3kV Peak let-through for 8HLE- E, 8AHLE- E and 8BHLE- E



8HLE- , 8BHLE- , 8AHLE-

Curve 70548804
 September 1999
 Reference # 705488

Curve 70547201
 April 1999
 Reference # 705472

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Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
Eaton.com

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

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