

## 8.3kV E-Rated

Medium voltage fuses for feeder circuit, switchgear and transformer protection



### Description:

- 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.
- 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)

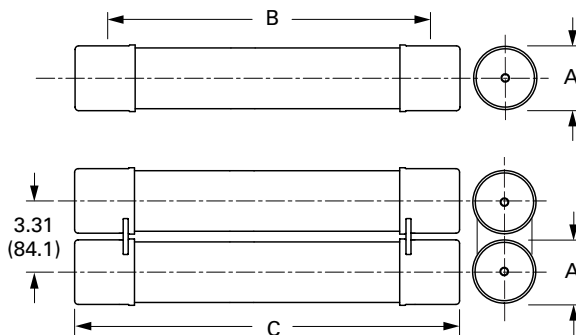
#### Ratings\*:

- 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:

Amp rating	Fuse mounting type*	Voltage BIL (kV)	Approximate dimensions - in (mm)			Catalog number				
			Diameter A	Clip center B	Length C	Mounting (including live parts, end fittings)**	Porcelain insulator	Glass-polyester insulator	Live parts (including end fittings)	End fittings (disconnect only)
<b>CLE</b>										
10E-D-25E-D 30E-175E Single barrel	Non-disconnect	75	3.0 (76)	14 (356)	17.9 (455)	8CLE-PNM-D	8CLE-GNM-D	CLE-NL-D	—	
	Disconnect†	75				8CLE-PDM-D	8CLE-GDM-D	CLE-DL-D	CLE-DF-D	
15E-25E Single Barrel	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 Double barrel	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	
<b>HLE</b>										
10E-175E Single barrel	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 Double barrel	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.

#### 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

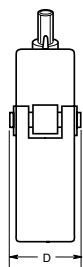


Figure 3



**CLE and HLE type fuses**

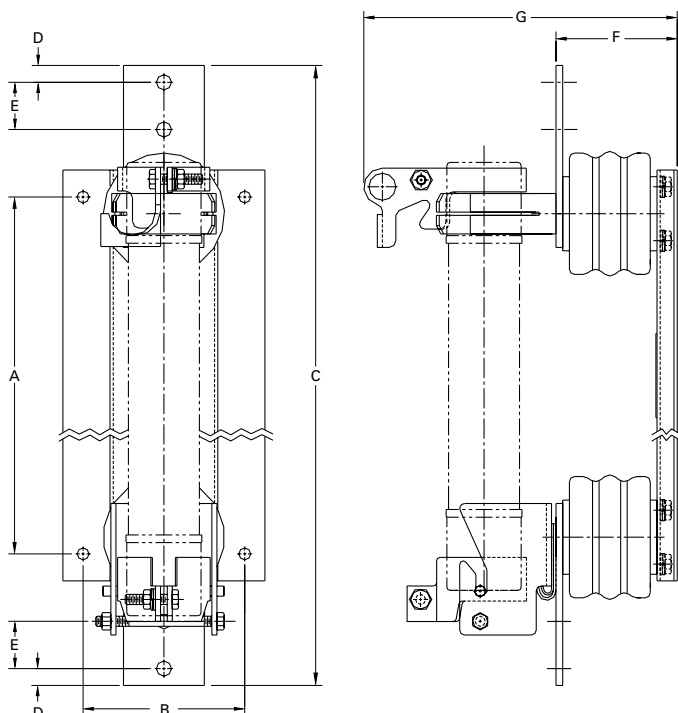
Amp rating	Dimensions - in (mm)			Interrupting rating kA (RMS Sym.)	Number of barrels	Installation location	Catalog number
	Length A	Diameter B	Clip centers C				
<b>CLE Long construction (Westinghouse)</b>							
10	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-10E-D
15	15.5 (394)	2 (51)	14 (356)	50	1	Indoor	8CLE-15E*
15	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-15E-D
20	15.5 (394)	2 (51)	14 (356)	50	1	Indoor	8CLE-20E*
20	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-20E-D
25	15.5 (394)	2 (51)	14 (356)	50	1	Indoor	8CLE-25E*
25	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-25E-D
30	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-30E
40	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-40E
50	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-50E
65	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-65E
80	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-80E
100	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-100E
125	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-125E
150	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-150E
175	17.9 (455)	3 (76)	14 (356)	50	1	Indoor/outdoor	8CLE-175E
200	17.9 (455)	3 (76)	14 (356)	50	2	Indoor/outdoor	8CLE-200E
250	17.9 (455)	3 (76)	14 (356)	50	2	Indoor/outdoor	8CLE-250E
300	17.9 (455)	3 (76)	14 (356)	50	2	Indoor/outdoor	8CLE-300E
350	17.9 (455)	3 (76)	14 (356)	50	2	Indoor/outdoor	8CLE-350E
<b>HLE Short construction</b>							
10	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-10E
15	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-15E
20	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-20E
25	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-25E
30	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-30E
40	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-40E
50	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-50E
65	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-65E
80	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-80E
100	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-100E
125	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-125E
150	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-150E
175	15.9 (404)	3 (76)	12 (305)	50	1	Indoor/outdoor	8HLE-175E
200	15.9 (404)	3 (76)	12 (305)	50	2	Indoor/outdoor	8HLE-200E
250	15.9 (404)	3 (76)	12 (305)	50	2	Indoor/outdoor	8HLE-250E
300	15.9 (404)	3 (76)	12 (305)	50	2	Indoor/outdoor	8HLE-300E
350	15.9 (404)	3 (76)	12 (305)	50	2	Indoor/outdoor	8HLE-350E

\* Fuses conform to dimensional standards established by Westinghouse.

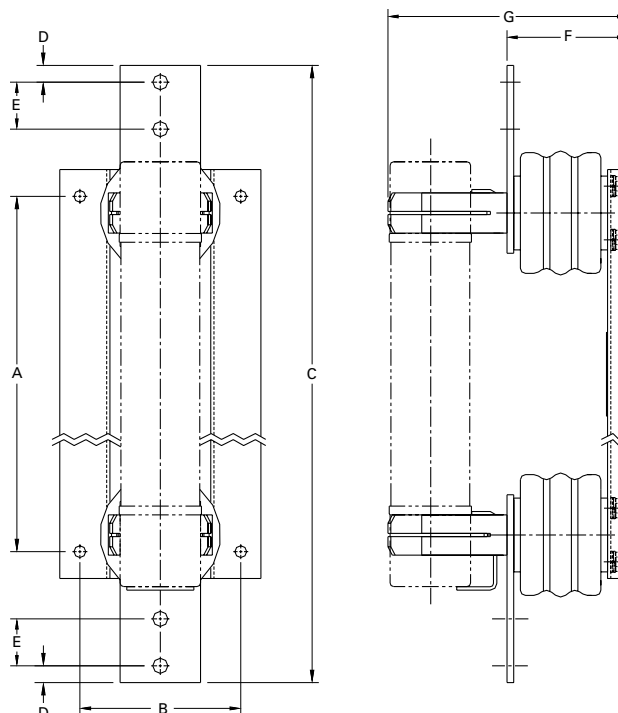
CLE and HLE type mountings - in (mm)

Catalog number	Hole centers		Overall length C	Hole Inset D	Hole centers		Contact height F	Overall height G	BIL kV
	A	B			E				
<b>Disconnect single barrel†</b>									
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	
<b>Disconnect double barrel†</b>									
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	
<b>Non-disconnect single barrel</b>									
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	
<b>Non-disconnect double barrel</b>									
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 7.2kV rated, 800 amp AMPGARD motor starting assemblies)**

Amp rating	Interrupting rating kA (RMS Sym.)	Number of barrels	Catalog number
10	50	1	8AHLE-10E
15	50	1	8AHLE-15E
20	50	1	8AHLE-20E
25	50	1	8AHLE-25E
30	50	1	8AHLE-30E
40	50	1	8AHLE-40E
50	50	1	8AHLE-50E
65	50	1	8AHLE-65E
80	50	1	8AHLE-80E
100	50	1	8AHLE-100E
125	50	1	8AHLE-125E
150	50	1	8AHLE-150E
175	50	1	8AHLE-175E
200	50	2	8AHLE-200E
250	50	2	8AHLE-250E
300	50	2	8AHLE-300E
350	50	2	8AHLE-350E

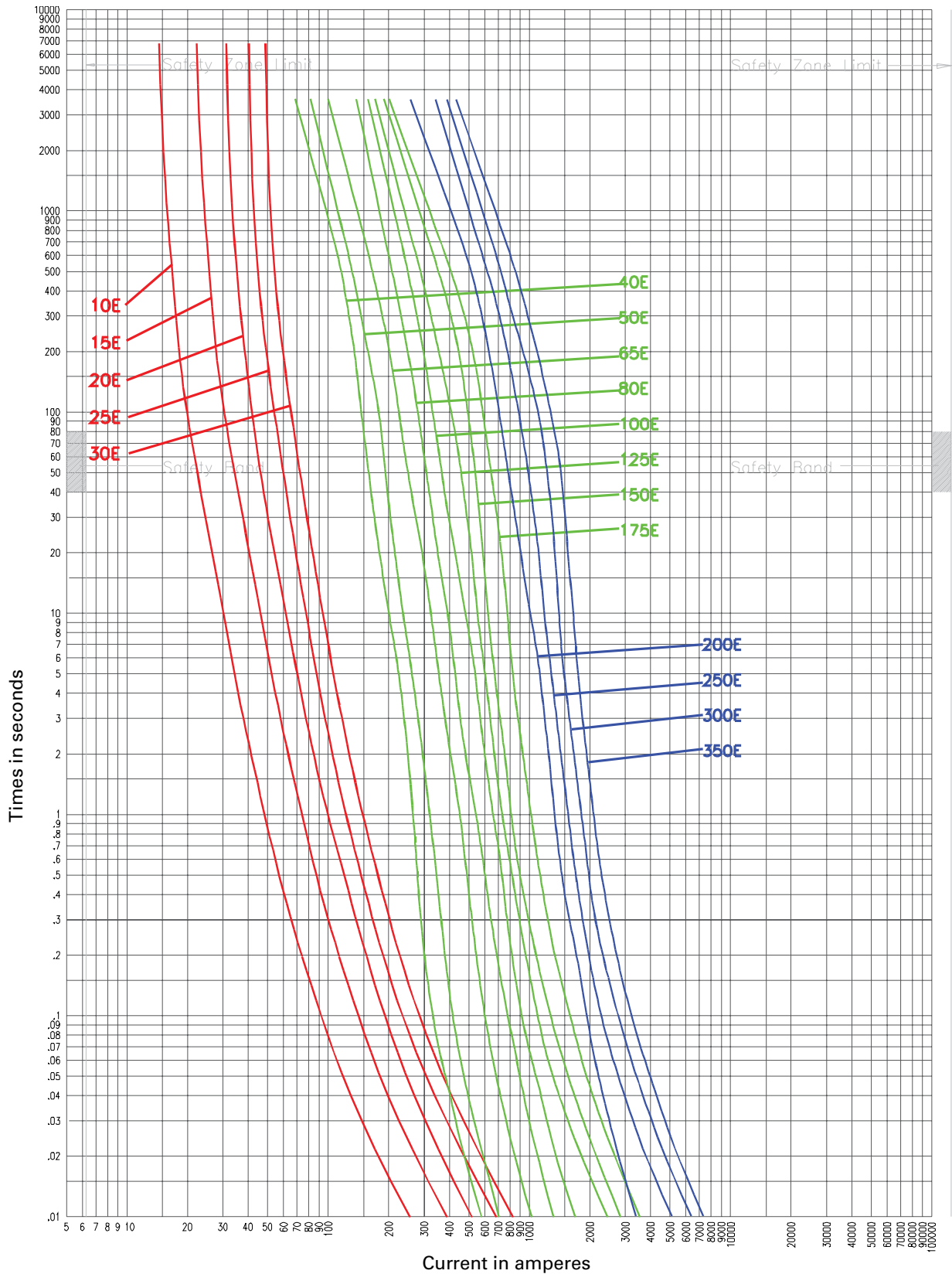
**BHLE bolt-on versions**

Amp rating	Dimensions - in (mm)			Interrupting rating kA (RMS Sym.)	Number of barrels	Installation location	Catalog number
	Overall length	Diameter	Hole centers				
10	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-10E
15	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-15E
20	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-20E
25	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-25E
30	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-30E
40	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-40E
50	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-50E
65	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-65E
80	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-80E
100	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-100E
125	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-125E
150	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-150E
175	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	1	Indoor	8BHLE-175E
200	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	2	Indoor	8BHLE-200E
250	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	2	Indoor	8BHLE-250E
300	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	2	Indoor	8BHLE-300E
350	19.25 (488.9)	3 (76.2)	17.88 (454.2)	50	2	Indoor	8BHLE-350E

**HCL clip lock versions**

Amp rating	Dimensions - in (mm)			Interrupting rating kA (RMS Sym.)	Number of barrels	Installation location	Catalog number
	Overall length	Diameter	Hole centers				
65	22.5 (571.5)	3 (76.2)	N/A	50	1	Indoor/outdoor	8HCL-65E
80	22.5 (571.5)	3 (76.2)	N/A	50	1	Indoor/outdoor	8HCL-80E
100	22.5 (571.5)	3 (76.2)	N/A	50	1	Indoor/outdoor	8HCL-100E
125	22.5 (571.5)	3 (76.2)	N/A	50	1	Indoor/outdoor	8HCL-125E
150	22.5 (571.5)	3 (76.2)	N/A	50	1	Indoor/outdoor	8HCL-150E
175	22.5 (571.5)	3 (76.2)	N/A	50	1	Indoor/outdoor	8HCL-175E
200	22.5 (571.5)	3 (76.2)	N/A	50	2	Indoor/outdoor	8HCL-200E
250	22.5 (571.5)	3 (76.2)	N/A	50	2	Indoor/outdoor	8HCL-250E
300	22.5 (571.5)	3 (76.2)	N/A	50	2	Indoor/outdoor	8HCL-300E
350	22.5 (571.5)	3 (76.2)	N/A	50	2	Indoor/outdoor	8HCL-350E

8.3kV time-current curves — minimum melt for 8CLE-E and 8CLE-D



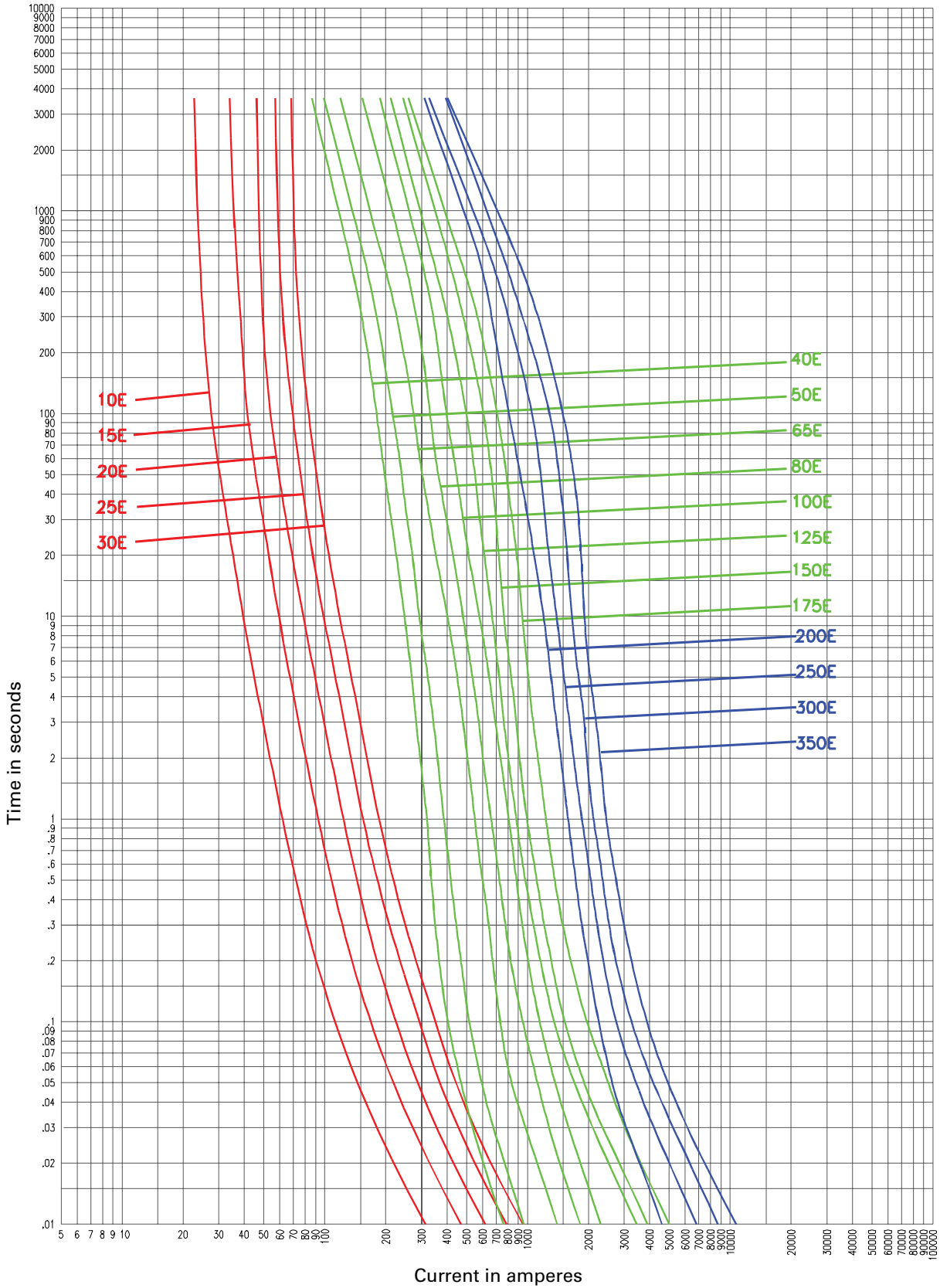
8CLE-  

Curve 70548501  
April 16, 1999  
Reference # 563532

Curve 70546201  
April 1999  
Reference # 705462

Curve 70546401  
April 1999  
Reference # 705464

8.3kV time-current curves — total clear for 8CLE-\_E and 8CLE\_-\_D



8CLE-\_

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



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

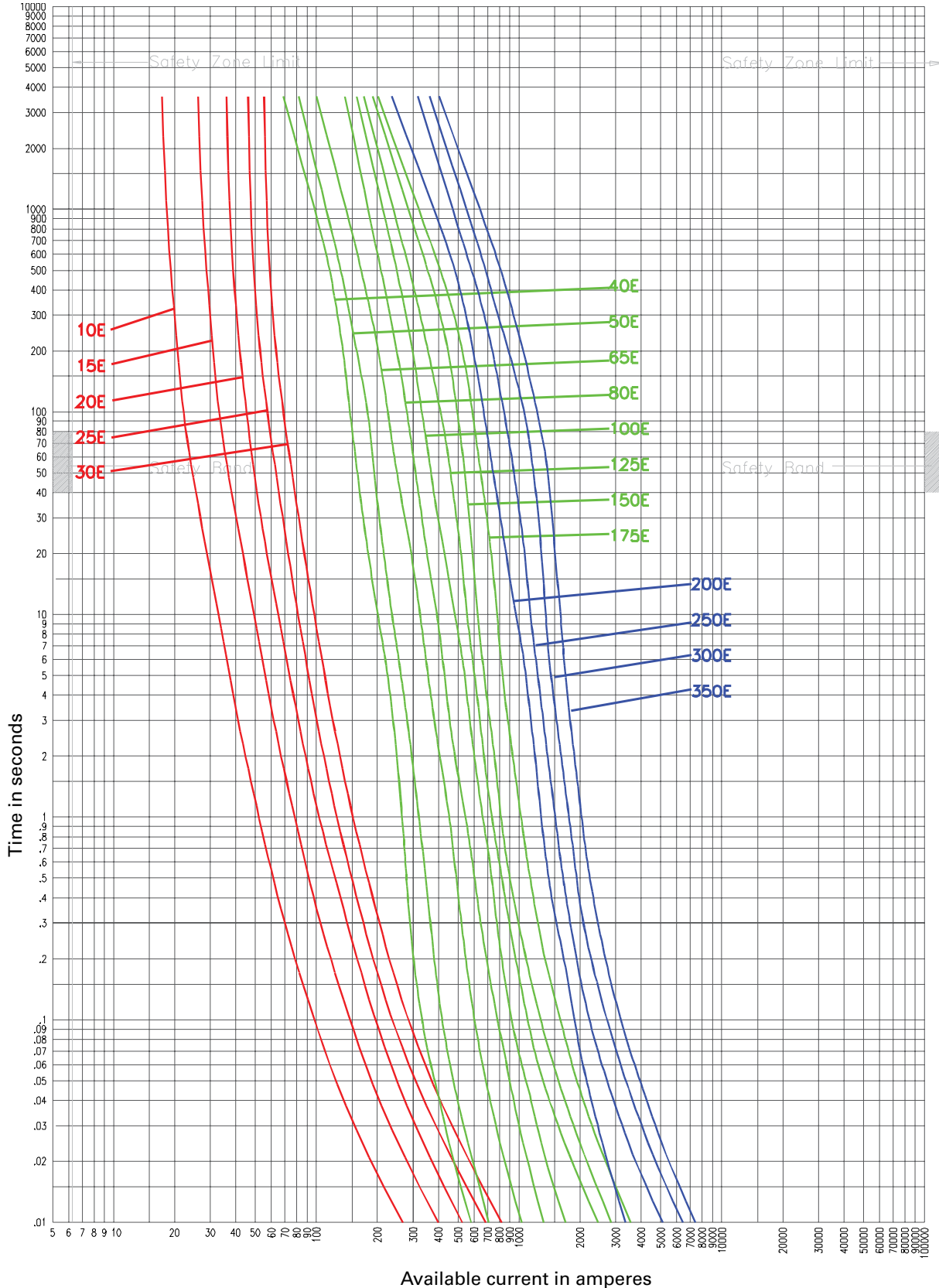


8CLE-\_

Curve 70548801  
September 1999  
Reference # 705488

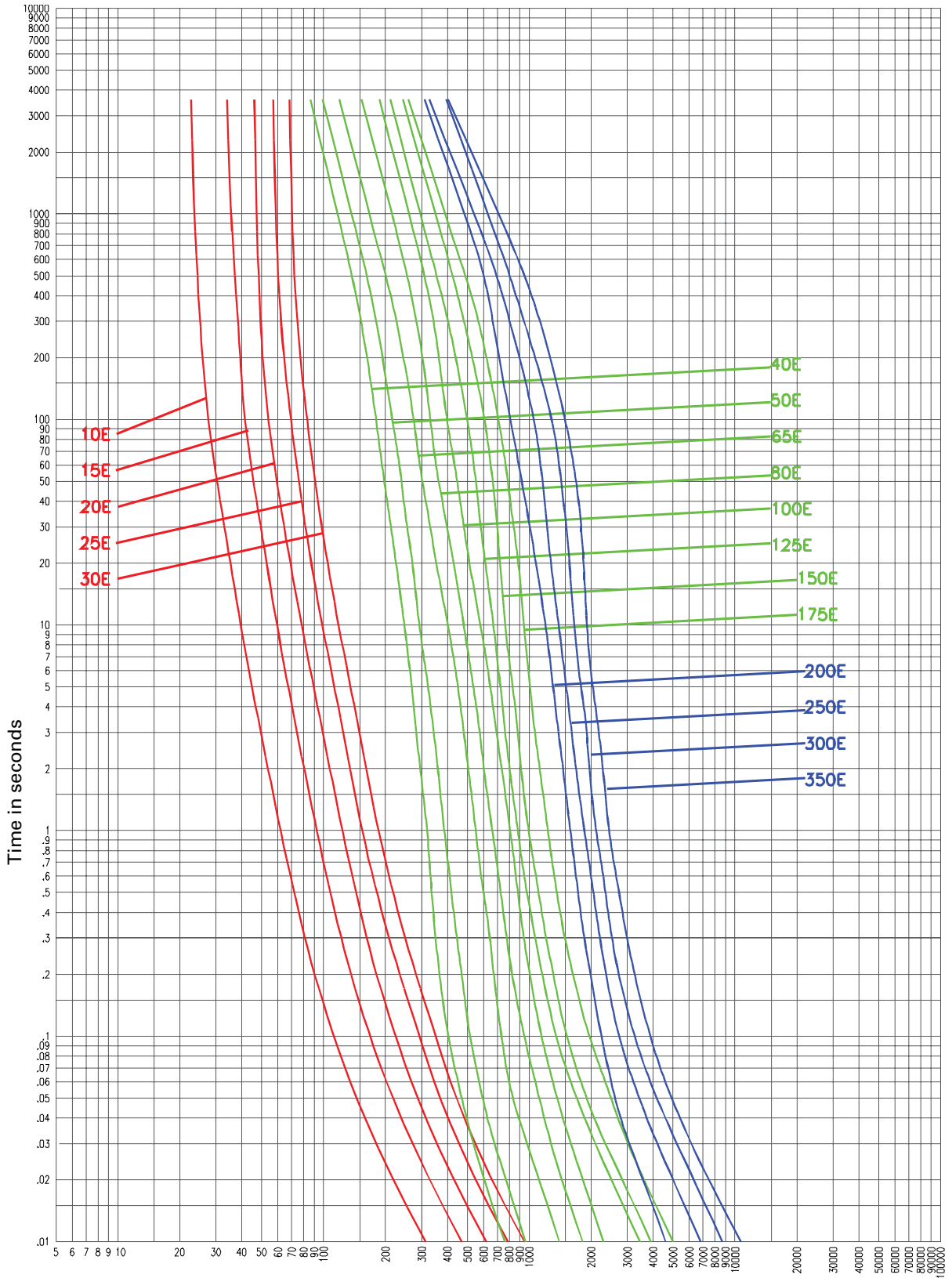
Curve 70547301  
April 1999  
Reference # 705473

8.3kV Time-current curves — minimum melt for 8HLE-<sub>E</sub>, 8AHLE-<sub>E</sub> and 8BHLE-<sub>E</sub>



8HLE- <sub>E</sub> , 8BHLE- <sub>E</sub> , 8AHLE- <sub>E</sub>	Curve 70548507 April 16, 1999 Reference # 563532	Curve 70546203 April 1999 Reference # 705462	Curve 70546403 April 1999 Reference # 705464
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8.3kV Time-current curves — total clear for 8HLE-<sub>E</sub>, 8AHLE-<sub>E</sub> and 8BHLE-<sub>E</sub>



Available current in amperes

8HLE- <sub>E</sub> , 8BHLE- <sub>E</sub> , 8AHLE- <sub>E</sub>	Curve 70548607 April 16, 1999 Reference # 563533	Curve 70546303 April 1999 Reference # 705463	Curve 70546503 April 1999 Reference # 705465
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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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- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».



## JONHON

«**JONHON**» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«**FORSTAR**» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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