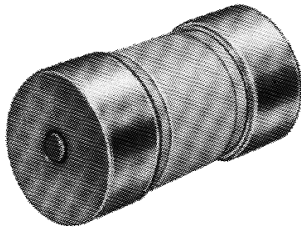


# 660VDC

## FERRULE FUSES / SPECIAL PURPOSE

SIZE: 27X60



### Ratings

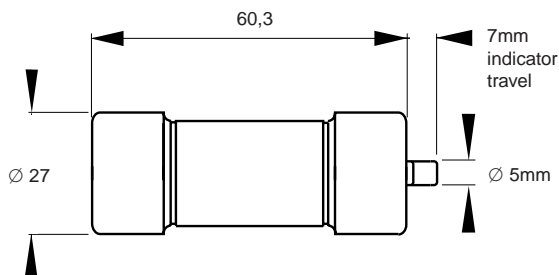
- 0.8 to 110 Amps
- 660VDC at 50kA  
I.R. 4R=15mSec

### Features/Benefits

- **Full Range** D.C. operation
- **27x60mm** ceramic cylindrical body
- **Blown Fuse** indicator striker
- **Underwriters Recognized** component



### ➤ Dimensions



Indicator Trip Force: 4.5N at 0mm-2.5N at 7mm

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### APPLICATIONS DATA

SIZE	CURRENT RATING $I_N$ (A)	INTERRUPTING RATING	WATTS LOSS		CATALOG NUMBER	REF. NUMBER
			0.8 $I_N$	$I_N$		
27 x 60	0.8	@ 660V DC 50kA L/R = 15ms	0.25	0.4	CC 6,621 CPgRB 27x60/0.8	H098585
	1		0.25	0.4	CC 6,621 CP gRB 27x60/1	J098586
	1.5		0.35	0.6	CC 6,621 CP gRB 27x60/1.5	K098587
	2		0.4	0.7	CC 6,621 CP gRB 27x60/2	P098591
	3.15		0.6	1	CC 6,621 CP gRB 27x60/3.15	Q098592
	4		0.6	1	CC 6,621 CP gRB 27x60/4	R098593
	5		0.7	1.1	CC 6,621 CP gRB 27x60/5	T098595
	6.3		0.8	1.3	CC 6,621 CP gRB 27x60/6.3	Z098600
	8		1.2	2	CC 6,621 CP gRB 27x60/8	L076301
	10		1.3	2.3	CC 6,621 CP gRB 27x60/10	M076302
	12		1.4	2.4	CC 6,621 CP gRB 27x60/12	L075703
	16		1.9	3.3	CC 6,621 CP gRB 27x60/16	N076303
	20		2.4	4.1	CC 6,621 CP gRB 27x60/20	C077006
	25		2.8	4.7	CC 6,621 CP gRB 27x60/25	M075635
	32		3.5	6	CC 6,621 CP gRB 27x60/32	P076304
	40		4.7	8	CC 6,621 CP gRB 27x60/40	Q076305
	50		4.8	8.3	CC 6,621 CP gRB 27x60/50	R076306
63	5.6	9.6	CC 6,621 CP gRB 27x60/63	P079961		
80	6.4	11.2	CC 6,621 CP gRB 27x60/80	S079964		
100	7.4	12.9	CC 6,621 CP gRB 27x60/100	T099400		
110	7.7	13.7	CC 6,621 CP gRB 27x60/110	S076307		

Minimum trip voltage: 20V

# 1000V DC

## FERRULE FUSES/SPECIAL PURPOSE

**SIZE: 20X127**



### Ratings

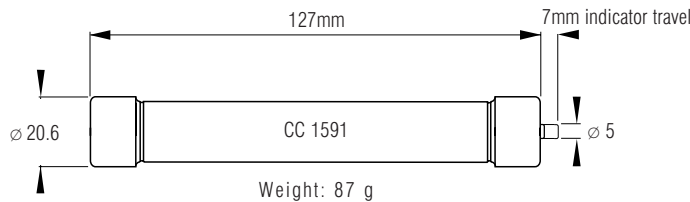
- 6 to 63 Amps
- 1000VDC at 100kA I.R.  
LR=20μSec

### Features/Benefits

- **Full Range** D.C. operation
- **20x127mm** ceramic cylindrical body
- **Blown Fuse** indicator striker



### ➤ Dimensions



Indicator Trip Force: 4.5N at 0mm-2.5N at 7mm

### APPLICATIONS DATA

SIZE	CURRENT RATING $I_N(A)$	INTERRUPTING RATING	WATTS LOSS		CATALOG NUMBER	REF. NUMBER	PACK
			0.8 $I_N$	$I_N$			
20 x 127	6	@ 1000V DC 100kA L/R = 20ms	2.0	3.5	CC 1051 CP gRB 20x127/6 D 100 gRB 006 VI	Z 088020	10 pieces
	8		2.2	3.8	CC 1051 CP gRB 20x127/8 D 100 gRB 008 VI	T 088774	
	10		2.4	4.2	CC 1051 CP gRB 20x127/10 D 100 gRB 010 VI	A 089493	
	12		3.0	5.3	CC 1051 CP gRB 20x127/12 D 100 gRB 012 VI	B 089493	
	16		3.7	6.6	CC 1051 CP gRB 20x127/16 D 100 gRB 016 VI	C 089495	
	20		4.4	7.7	CC 1051 CP gRB 20x127/20 D 100 gRB 020 VI	D 089496	
	25		5.1	9	CC 1051 CP gRB 20x127/25 D 100 gRB 025 VI	E 089497	
	32		6.0	10.5	CC 1051 CP gRB 20x127/32 D 100 gRB 032 VI	F 089498	
	40		7.3	13.2	CC 1051 CP gRB 20x127/40 D 100 gRB 040 VI	S 086795	
	50		8.5	15.5	CC 1051 CP gRB 20x127/50 D 100 gRB 050 VI	F 086186	
63*	9.6	17.4	CC 1051 CP gRB 20x127/63 D 100 gRB 063 VI	F 083656			

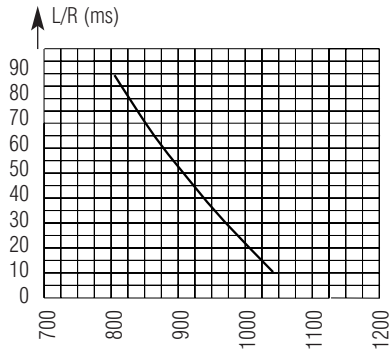
Minimum trip voltage: 50 V

•Use R.M.S. current less than 56 A when mounting in fuse holder.

# 1000V DC

## FERRULE FUSES/SPECIAL PURPOSE

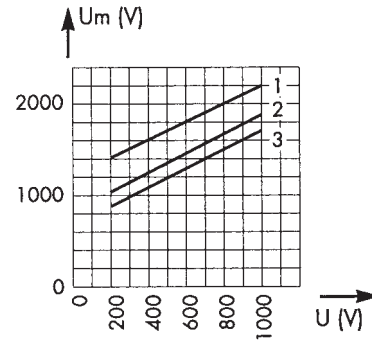
### DC Voltage Capabilities vs. Time Constant



Above: Curve indicates the maximum permissible value of time constant L/R as a function of DC working voltage.

**Max. AC voltage (50/60 Hz):** 1500V with interrupting rating of 100kA.

### Peak Arc voltage vs. working voltage

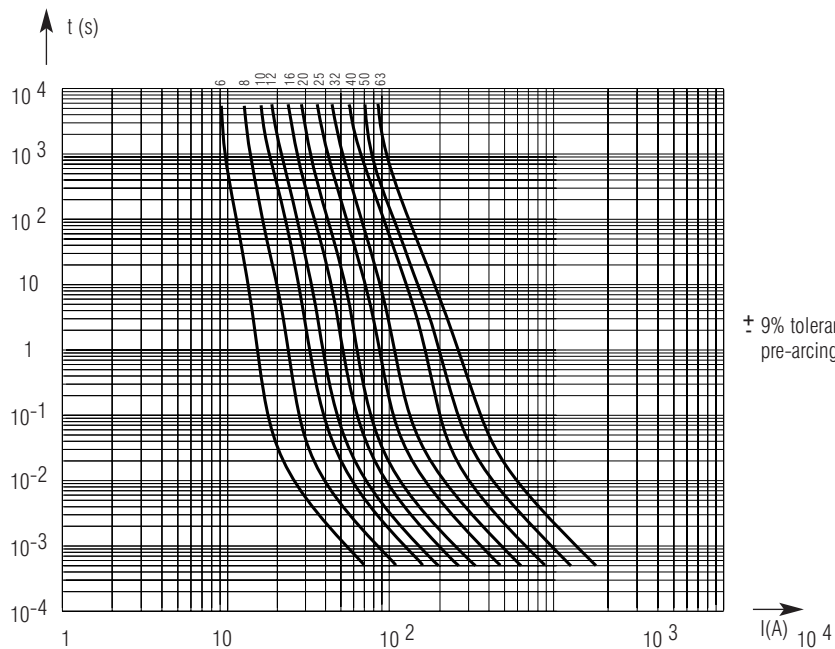


1-L/R = 50ms  
2-L/R = 25ms  
3-L/R = 15ms

Above: Curves indicate for various time constants L/R the peak arc voltage, which may appear across the fuse terminals, vs. DC working voltage.

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### Melting Time-Current Data

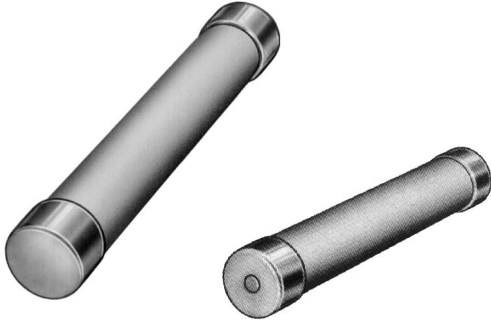


Above: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.

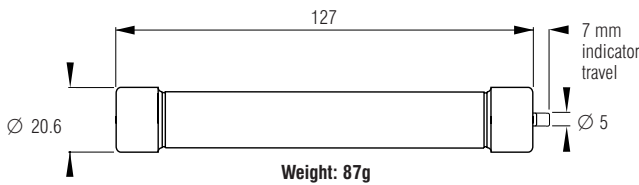
# 1500V DC

## FERRULE FUSES / SPECIAL PURPOSE

SIZE: 20X127



➤ **Dimensions**



Indicator Trip Force: 4.5N at 0mm-2.5N at 7mm - when so equipped\*

Ratings	Features/Benefits
---------	-------------------

- |   |  |
|---|--|
| <p><b>CC I551 CP gRB</b></p> <ul style="list-style-type: none"> <li>➤ 0.8 to 5 Amps</li> <li>➤ 1000vdc at 100kA L/R=100mSec</li> </ul> <p><b>CC 1500 CP gRB</b></p> <ul style="list-style-type: none"> <li>➤ 0.8 to 5 Amps</li> <li>➤ 1000vdc 30kA L/R=30mSec</li> </ul> <p><b>CC 1500 CP gRD</b></p> <ul style="list-style-type: none"> <li>➤ 6 to 25amps</li> <li>➤ 1500vdc at 30kA L/R=55mSec</li> </ul> | <p><b>CC 1551 CP gRB</b></p> <ul style="list-style-type: none"> <li>➤ <b>Blown Fuse</b> indicator striker</li> <li>➤ <b>20x127</b> ceramic cylindrical body</li> <li>➤ <b>Full range</b> D.C. operation</li> <li>➤ <b>Underwriters Component</b> </li> </ul> <p><b>CC 1500 CP gRB</b></p> <ul style="list-style-type: none"> <li>➤ <b>20x127</b> ceramic cylindrical body</li> <li>➤ <b>Full range</b> DC operation</li> </ul> <p><b>CC 1500 EP gRD</b></p> <ul style="list-style-type: none"> <li>➤ <b>20x127</b> ceramic cylindrical body</li> <li>➤ <b>Full range</b> DC operation</li> </ul> |
|---|--|

### APPLICATIONS DATA

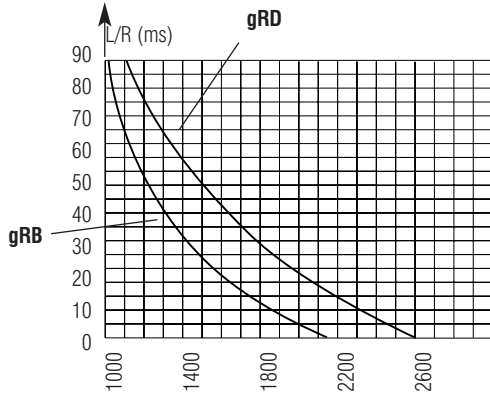
SIZE	CURRENT RATING I <sub>N</sub> (A)	INTERRUPTING RATING	WATTS LOSS		CATALOG NUMBER		REF. NUMBER	PACK	
			0.8 I <sub>N</sub>	I <sub>N</sub>	NEW	OLD			
20 x 127	0.8	@ 1000V DC 100kA L/R = 100ms	0.5	0.9	CC 1551 CP gRB 20x127/0.8	D 150 gRB 0.8 VI	E075743	3 and 10 pieces	
	1		0.5	0.9	CC 1551 CP gRB 20x127/1	D 150 gRB 001 VI	E075744		
	1.5		0.8	1.4	CC 1551 CP gRB 20x127/1.5	D 150 gRB 01.5 VI	G075745		
	2		0.9	1.6	CC 1551 CP gRB 20x127/2	D 150 gRB 002 VI	B088367		
	3.15		1.2	2.1	CC 1551 CP gRB 20x127/3.15	D 150 gRB 3.15 VI	H075746		
	4		1.3	2.1	CC 1551 CP gRB 20x127/4	D 150 gRB 004 VI	J075747		
	5		1.4	2.3	CC 1551 CP gRB 20x127/5	D 150 gRB 005 VI	C088368		
	0.8		@ 1000V DC 30kA L/R = 30ms	0.5	0.9	CC 1500 CP gRB 20x127/0.8	D 150 gRB 0.8 V		J081842
	1			0.5	0.9	CC 1500 CP gRB 20x127/1	D 150 gRB 001 V		R079894
	1.5			0.8	1.4	CC 1500 CP gRB 20x127/1.5	D 150 gRB 01.5 V		K081843
	2	0.9		1.6	CC 1500 CP gRB 20x127/2	D 150 gRB 002 V	Y099243		
	3.15	1.2		2.1	CC 1500 CP gRB 20x127/3.15	D 150 gRB 3.15 V	L081844		
	4	1.3		2.1	CC 1500 CP gRB 20x127/4	D 150 gRB 004 V	Z099244		
	5	1.4		2.3	CC 1500 CP gRB 20x127/5	D 150 gRB 005 V	A099245		
	6	@ 1500V DC 30kA L/R = 55ms		3.4	6.3	CC 1500 CP gRD 20x127/6	D 150 gRB 006 V		E082804
	8			3.3	6.0	CC 1500 CP gRD 20x127/8	D 150 gRB 008 V		Z080867
	10			3.5	6.1	CC 1500 CP gRD 20x127/10	D 150 gRB 010 V		F081655
	12		3.9	6.8	CC 1500 CP gRD 20x127/12	D 150 gRB 012 V	B080593		
	16		5	8.9	CC 1500 CP gRD 20x127/16	D 150 gRB 016 V	Q081457		
	20		5.3	9.6	CC 1500 CP gRD 20x127/20	D 150 gRB 020 V	D082803		
	25		6.6	12	CC 1500 CP gRD 20x127/25	D 150 gRB 025 V	A080431		

\*Minimum trip voltage: 50V

# 1500V DC

## FERRULE FUSES/SPECIAL PURPOSE

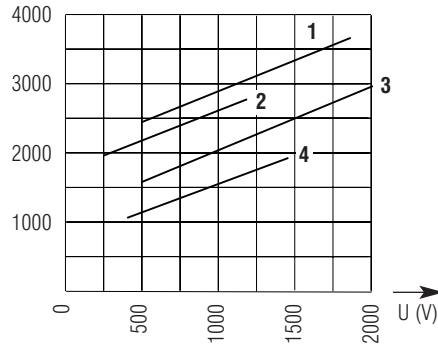
### DC Application Data



Above: Curves indicate maximum permissible value of time constant L/R as a function of DC working voltage.

**Max. AC voltage (50/60 Hz):** 2500V with interrupting rating of 50kA.

### Peak Arc voltage vs. working voltage

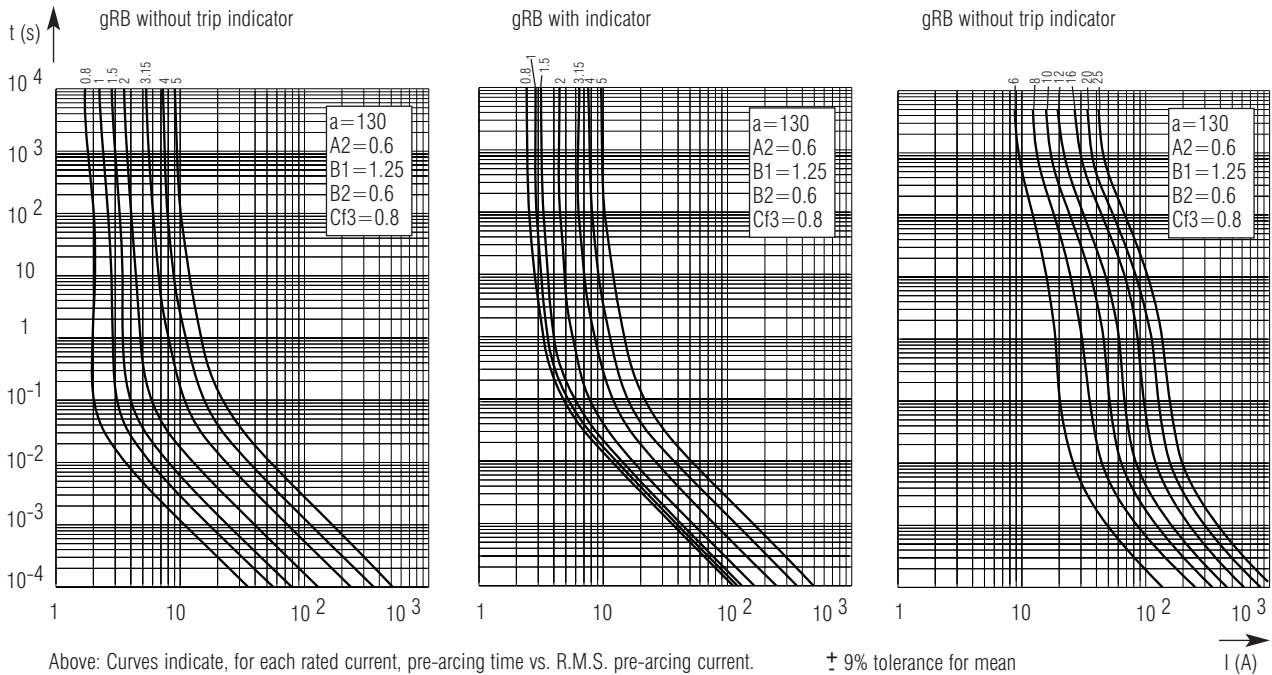


Curve 1: gRD @ L/R = 30ms  
Curve 2: gRB @ L/R = 60ms  
Curve 3: gRD @ L/R = 15ms  
Curve 4: gRB @ L/R = 30ms

Above: Curves indicate for various time constants L/R peak arc voltage, which may appear across the fuse terminals, vs. DC working voltage.



### Time vs. current characteristics



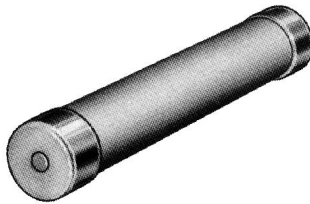
Above: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.

± 9% tolerance for mean pre-arcing current

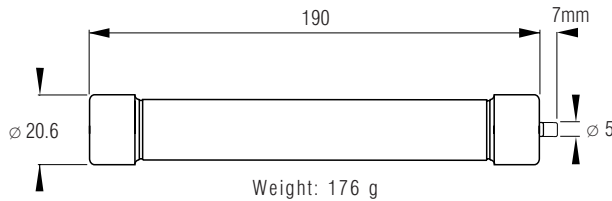
# 1500V DC

## FERRULE FUSES / SPECIAL PURPOSE

**SIZE: 20X190**



➤ **Dimensions**



Indicator Trip Force: 4.5N at 0mm - 2.5N at 7mm - when so equipped\*

**Ratings**

**CC 1591 CP gRC**

- 6 to 32 Amps
- 1500vdc at 60kA  
L/R=40mSec

**CC 1500 CP gRC**

- 6 to 32 Amps
- 1500vdc 60kA  
L/R=40mSec

**Features/Benefits**

**CC 1591 CP gRC**

- **Blown Fuse** indicator striker
- **20x190** ceramic cylindrical body
- **Full range** D.C. operation

**CC 1500 CP gRC**

- **20x190** ceramic cylindrical body
- **Full range** D.C. operation



### APPLICATIONS DATA

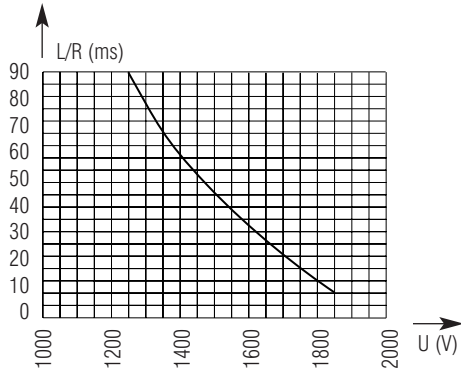
SIZE	CURRENT RATING I <sub>N</sub> (A)	INTERRUPTING RATING	WATTS LOSS		CATALOG NUMBER	REF. NUMBER	PACK
			0.8 I <sub>N</sub>	I <sub>N</sub>			
20 x 190	6	@ 1500V DC 60kA L/R = 40ms	4.8	7.8	CC 1591 CP gRC 20x190/6	D083102	10 pieces
	8		5.3	8.8	CC 1591 CP gRC 20x190/8	V083738	
	10		6.5	10.5	CC 1591 CP gRC 20x190/10	G087245	
	12		7.0	11.5	CC 1591 CP gRC 20x190/12	Y080429	
	16		8.0	13	CC 1591 CP gRC 20x190/16	N088378	
	20		9.5	15	CC 1591 CP gRC 20x190/20	Q087345	
	25		12	19.5	CC 1591 CP gRC 20x190/25	Z080430	
	32		16	26	CC 1591 CP gRC 20x190/32	G085911	
	6		4.8	7.8	CC 1500 CP gRC 20x190/6	Z089469	
	8		5.3	8.8	CC 1500 CP gRC 20x190/8	A089470	
	10		6.5	10.5	CC 1500 CP gRC 20x190/10	B089471	
	12		7.0	11.5	CC 1500 CP gRC 20x190/12	C089472	
	16		8.0	13	CC 1500 CP gRC 20x190/16	D089473	
	20		9.5	15	CC 1500 CP gRC 20x190/20	E089474	
	25		12	19.5	CC 1500 CP gRC 20x190/25	F089475	
	32		16	26	CC 1500 CP gRC 20x190/32	G089476	

\*Minimum trip voltage: 90V

# 1500V DC

## FERRULE FUSES/SPECIAL PURPOSE

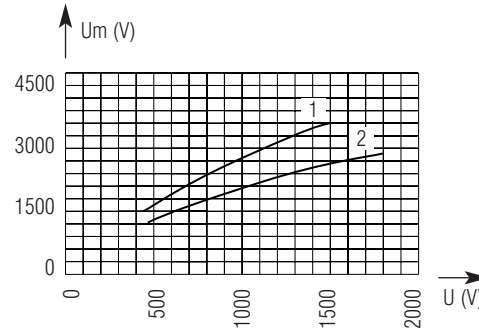
### DC Application Data



Above: Curve indicates maximum permissible value of time constant L/R as a function of DC working voltage.

**Max. AC voltage (50/60 Hz):** 2500V with interrupting rating of 50kA.

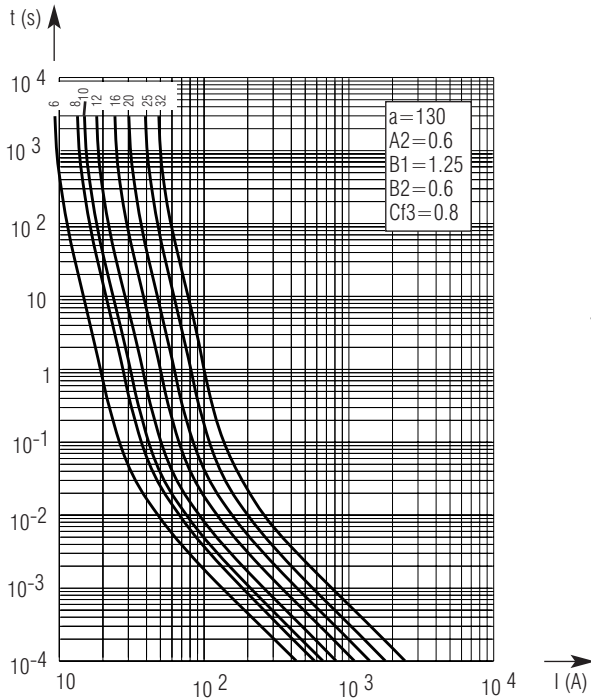
### Peak Arc voltage vs. working voltage



1-L/R = 45ms  
2-L/R = 15ms

Above: Curves indicate for various time constants L/R peak arc voltage, which may appear across the fuse terminals, vs. DC working voltage.

### Time vs. current characteristics



± 7% tolerance for mean pre-arcing current

Above: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.

