

Specification for

Cartridge fuses for aircraft —

Part 2: Cartridge Fuses and Fuse-Links (Type A)

[UDC 621.316.923:629.13.066]

Foreword

Cartridge fuses complying with this Part of BS G 176 are suitable for use in all types of aircraft electrical systems. They are intended to satisfy British Service and Civil airworthiness requirements.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 31 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date of issue	Comments
4557	May 1962	
5270	July 1964	
5751	February 1966	
4105	November 1982	Indicated by a sideline in the margin

This British Standard, having been approved by the Aircraft Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council of the Institution on 6 May 1960

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The following BSI references relate to the work on this standard:
Committee reference ACE/43
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Obsolescent (by Amendment No. 3)

The need for the equipment covered by this British Standard has been reviewed and it has been decided that, in the interests of rationalization, it should be regarded as obsolescent and not therefore used for new designs. The standard will be withdrawn in due course.

1 Scope

This Part of BS G 176 specifies the requirements for the dimensions and performance of a particular range of cartridge fuses for aircraft (Type A), known as the “Inter-Service” type

2 General requirements

The fuses shall comply with the requirements of Part 1 of this British Standard.

3 Dimensions

The dimensions of the fuse-links shall be in accordance with those shown in Table 2 or Table 3, as appropriate.

4 Voltage, current ratings and category of duty

The voltage, current ratings and category of duty of the fuses shall be in accordance with those listed in Table 1.

5 Time/current characteristics (fuse-links)

The time/current characteristics of fuse-links shall be within the envelope curves shown in Appendix A.

6 Tests

The fuses shall be tested in accordance with Part 1, Section 2, of this British Standard.

Table 1 — Ratings of fuse-links

1	2	3	4	5	6	7	8	9	10	11			
Body size	Continuous current rating		Type of end cap	Voltage rating and category of duty	Voltage drop (Measured in accordance with Part 1, Appendix A)			Duration of test for minimum fusing current	Cable to be used during tests				
	− 65 °C to + 35 °C	+ 35 °C to + 85 °C			Mean value (millivolts)		Percentage tolerance on mean value						
					min.	max.			BS E 21	BS G 177			
00	amp 0.05	amp 0.04	} Ferrule only	} 250AC2 230DC2	3 560	4 300	± 20	hours 1.0	Unipren 4	Uninyvin 22			
	0.1	0.08			2 500	3 000	20						
	0.25	0.2			1 550	1 850	20						
	0.5	0.4			1 750	2 100	15						
	1.0	0.8			250	385	15						
	2.0	1.6			190	275	15						
0	0.06	0.048	} Ferrule or tag	} 250AC2 230DC2	2 600	3 100	20	1.5	} Unipren 4	Uninyvin 22			
	0.1	0.08			2 000	3 100	20						
	0.15	0.12			3 000	3 800	20						
	0.25	0.2			3 250	3 960	15						
	0.5	0.4		2 100	2 500	12½							
	1.0	0.8		420	2 700	10							
	2	1.6		300	370	10							
	3	2.4		280	340	7½							
	5	4		220	300	7½							
	7	5.6		160	190	7½							
	10	8	135	170	7½	} Unipren 9	Uninyvin 18						
	15	12	125	185	7½								
	20	16	230	250	7½			} Unipren 18	Uninyvin 14				
1	0.5	0.4	} Ferrule or tag	} 440AC4 230DC4	3 340	3 420	12½	1.5	} Unipren 4	Uninyvin 22			
	1.0	0.8			2 500	3 250	10						
	2	1.6			370	450	10						
	3	2.4			430	550	7½						
	5	4			490	615	7½		} Unipren 6	Uninyvin 20			
	7	5.6			265	345	7½						
	10	8			165	190	7½		} Unipren 9	Uninyvin 18			
	15	12			140	155	7½						
	20	16			160	175	7½		} Unipren 18	Uninyvin 14			
	30	24			115	145	7½						
2	10	8	} Ferrule or tag	} 440AC4 230DC4	155	175	7½	2.0	} Unipren 9	Uninyvin 18			
	15	12			140	155	7½						
	20	16			155	170	7½		} Unipren 18	Uninyvin 14			
	30	24			105	125	7½						
	40	32			90	150	7½		} Unipren 35	Uninyvin 10			
	50	40			90	150	7½						
	60	48	} Tag only		75	145	7½	} Unipren 70	Uninyvin 6				
3	40	32			} Ferrule or tag	} 440AC4 230DC4	135			150	7½	} Unipren 35	Uninyvin 10
	60	48					125			140	7½		
	80	64					110			115	7½		
	100	80					99			104	7½		
	125	100			} Tag only		63			98	7½	Unipren 135	Uninyvin 2
	150	120	57	83			7½	Unipren 150	Uninyvin 1				
	200	160	a	a			a			Unipren 200	Uninyvin 00		

^a The following values have been obtained from one source:

Size 3/200	Mean voltage drop millivolts	Percentage tolerance ±
	81	7½

Table 2 — Dimensions of ferrule-type fuse-links

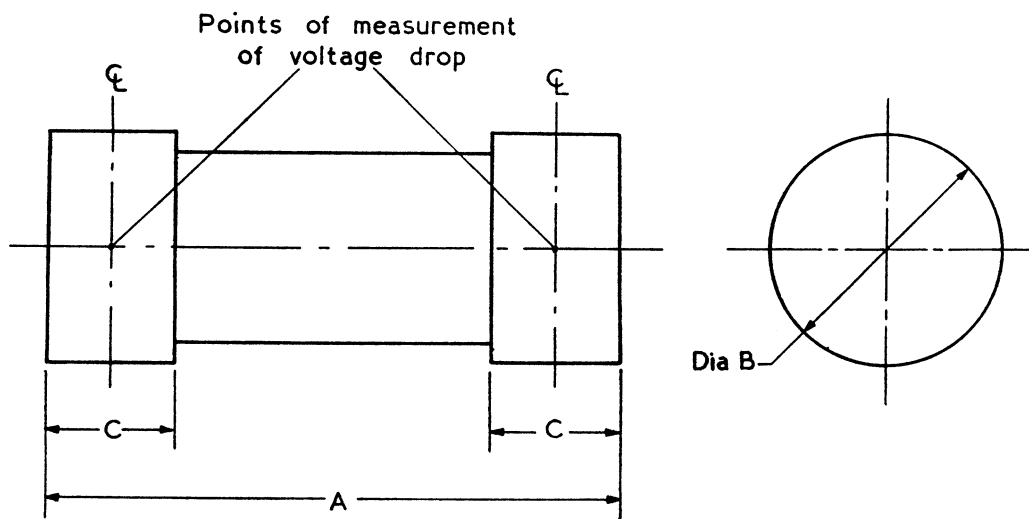
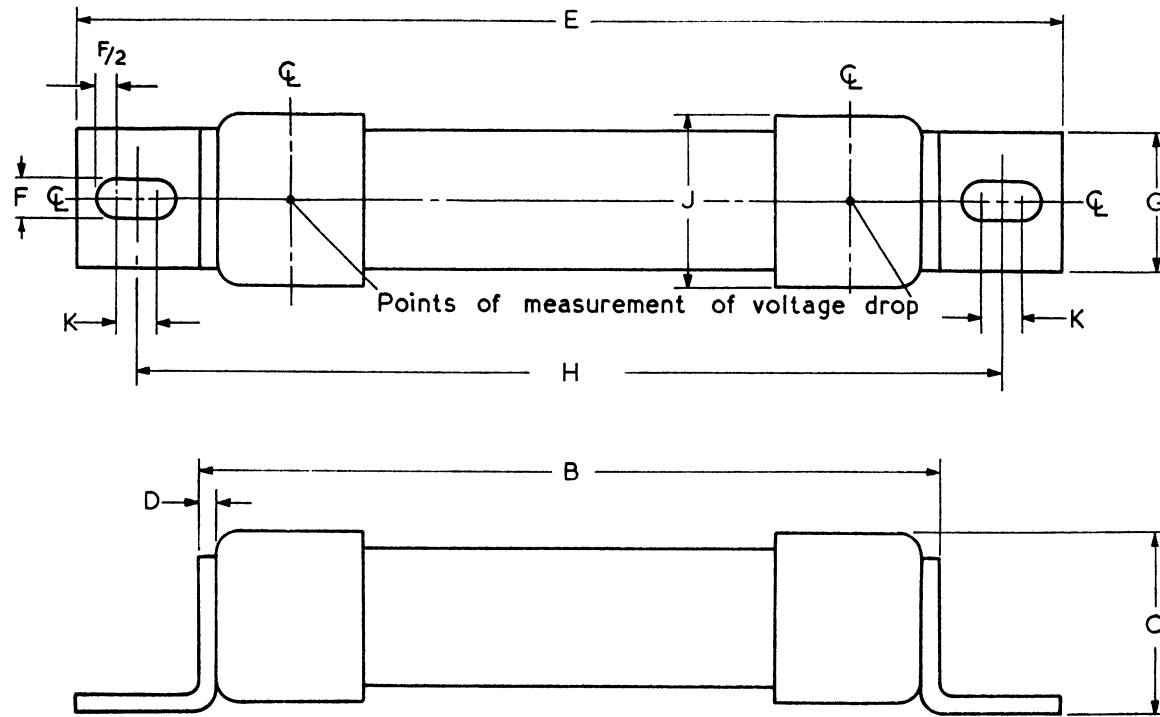


Figure 1

Third angle projection.

Body size	Dimensions in inches					
	A		B		C	
	max.	min.	max.	min.	max.	min.
00	0.656	0.609	0.192	0.182	0.192	0.125
0	1.281	1.234	0.255	0.245	0.250	0.187
1	1.354	1.291	0.474	0.463	0.312	0.250
2	1.509	1.454	0.663	0.656	0.374	0.312
3	1.919	1.858	1.319	1.306	0.499	0.437

Table 3 — Dimensions of tag-type fuse-links



Third angle projection

Figure 2

Body size	Dimensions in inches																
	B		C		D	E		F		G		H	J		K		L
	max.	min.	max.	min.	nom.	max.	min.	max.	min.	max.	min.	nom.	max.	min.	max.	min.	max.
0	—	—	0.289	0.275	0.032	2.097	1.974	—	0.147	0.255	0.245	1.71	0.255	0.245	0.032	0.028	0.25
1	—	—	0.500	0.475	0.032	2.234	2.160	—	0.194	0.406	0.375	—	0.474	0.463	0.055	0.020	0.312
2	1.490	1.450	0.720	0.704	0.048	2.818	2.754	0.270	0.256	0.630	0.600	—	0.663	0.656	0.055	0.020	0.375
3	—	—	1.382	1.360	0.063	3.522	3.462	0.334	0.318	1.030	1.000	—	1.319	1.306	0.055	0.020	0.5

Appendix A Envelope curves of time/current characteristics of fuse-links

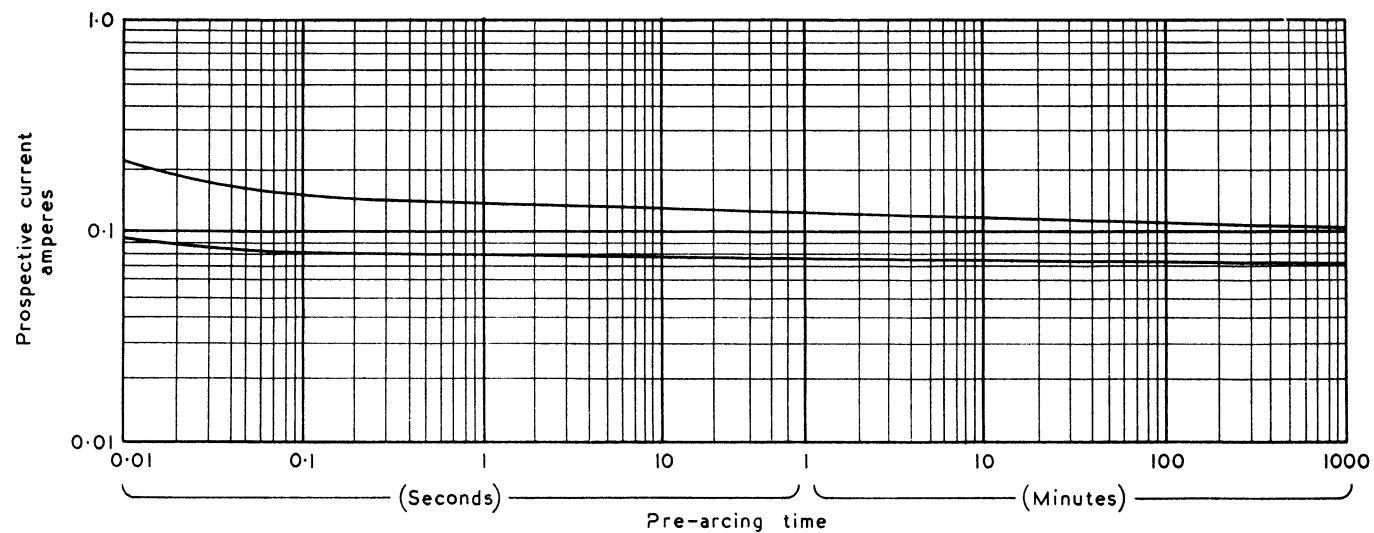


Figure 4 — Size 00, 0.05 amp.

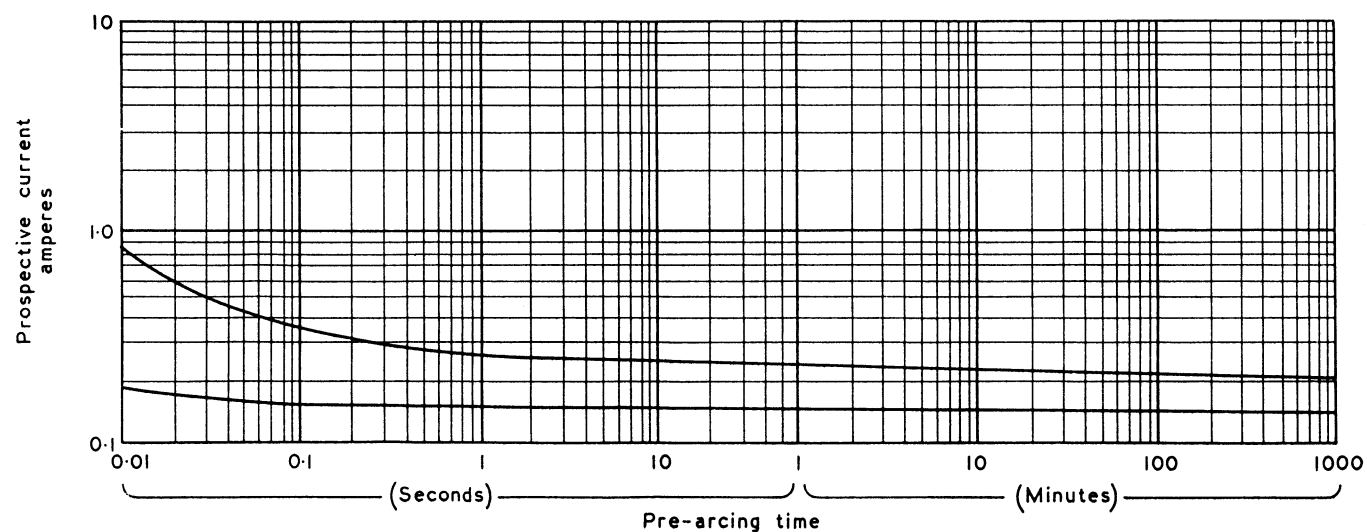


Figure 5 — Size 00, 0.1 amp.

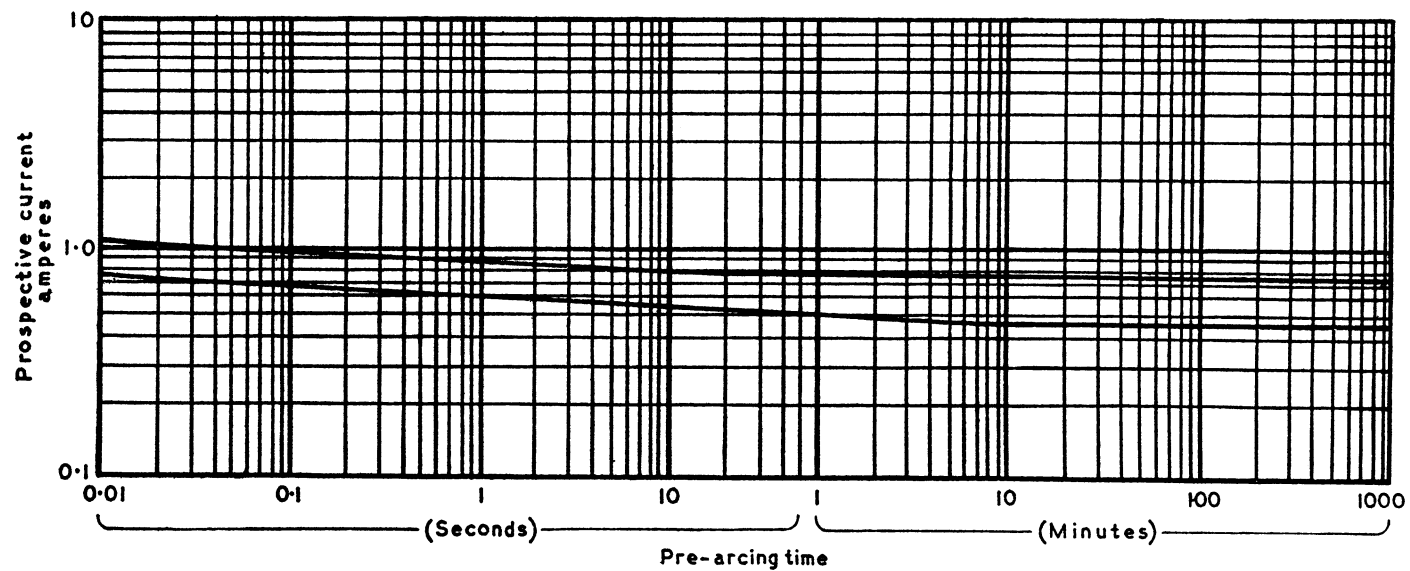


Figure 6 — Size 00, 0.25 amp.

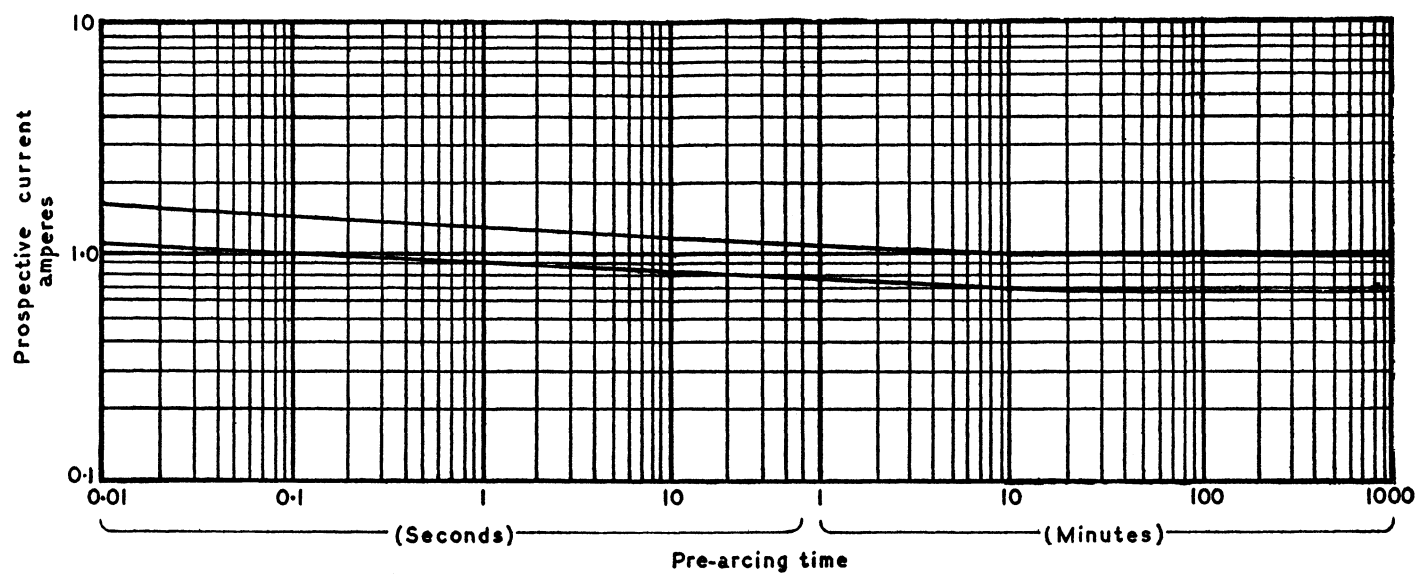


Figure 7 — Size 00, 0.5 amp.

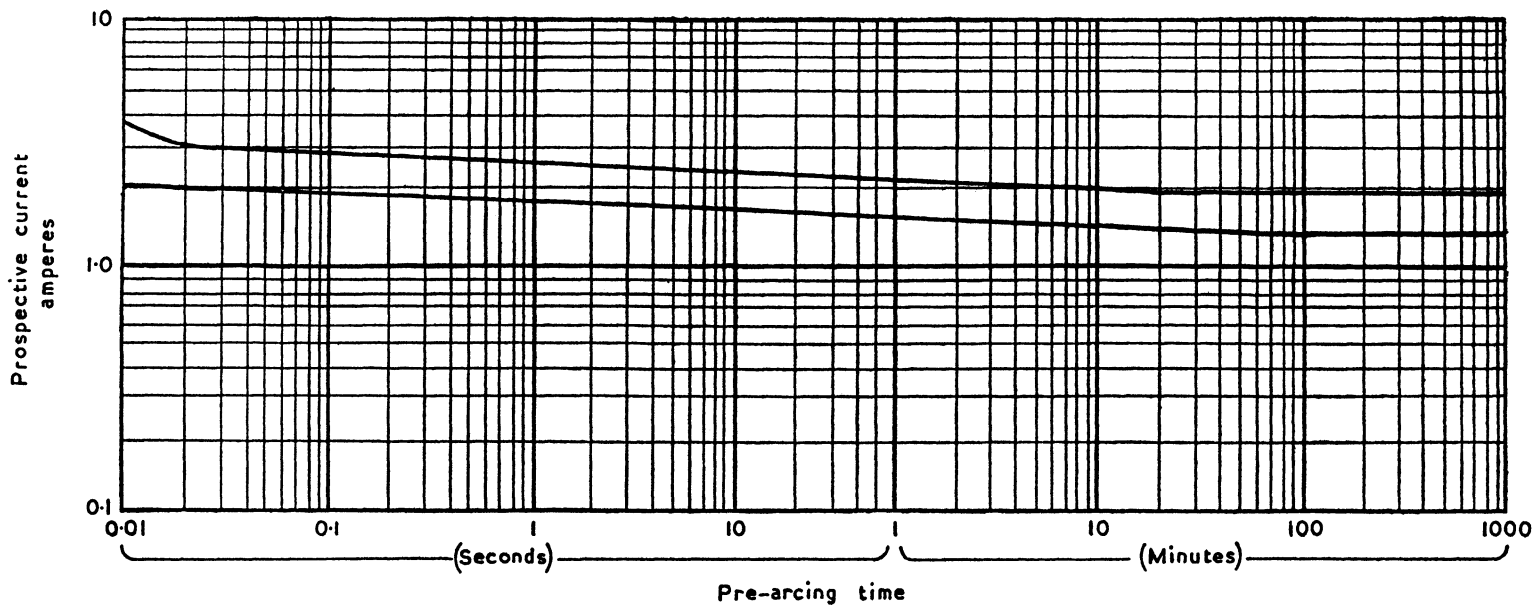


Figure 8 — Size 00, 1 amp.