

Eaton's Bussmann series
IEC High speed fuse links catalogue

BUSSMANN
SERIES

Leadership in fusible circuit protection

EATON

Powering Business Worldwide

170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Specifications

Description

Bolted tags high speed fuse links for the protection of IGBT modules, optimised for use in IGBT inverter circuits with DC link rated voltages up to 750 V d.c.. Low inductance $\leq 15\text{nH}$.

Technical data

- Rated voltage:
 - 750 V d.c. tested at 863V d.c. according to IEC 60269-4
 - 800 V d.c. tested at 800 V d.c. according to UL 248-1
- Rated current: 25 A to 630 A
- Breaking capacity: 50 kA DC (1ms tc) at 800 V d.c.
- Operating class: aR

Standards / Agency information

UL DC Recognised, 800 V d.c. L/R 1 mS max



Catalogue numbers

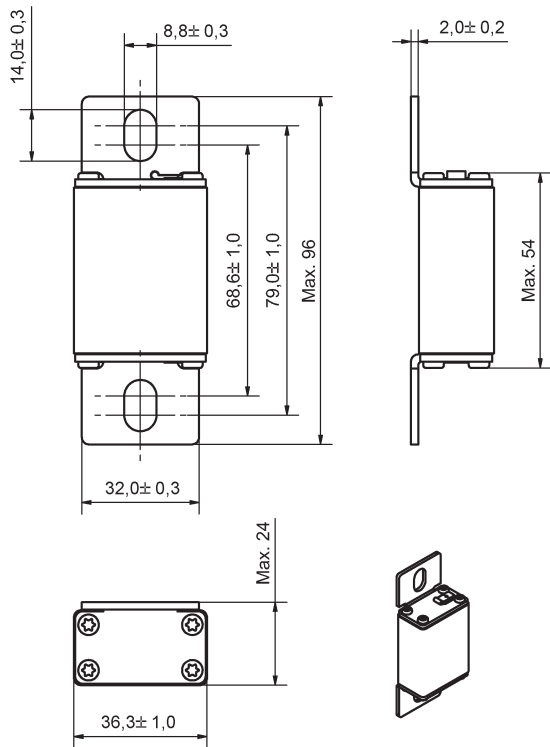
Fuse link body size	Rated voltage	Rated current (Amps)	I ² t (A ² Sec) Pre-arcng	Watts loss (W)	Catalogue numbers	
					-FU/70	-FN/70
000	750 V d.c. (IEC)	25	25	12	170M1750	170M1730
		32	45	13	170M1751	170M1731
		40	75	14	170M1752	170M1732
		50	135	16	170M1753	170M1733
		63	260	17	170M1754	170M1734
		80	460	20	170M1755	170M1735
		100	795	25	170M1756	170M1736
	800 V d.c. (UL)	125	1300	29	170M1757	170M1737
		160	2550	34	170M1758	170M1738
		200	4350	40	170M1759	170M1739
		250	7400	48	170M1760	170M1740
		315	12,500	60	170M1761	170M1741
		350	17,000	65	170M1762	170M1742
		230	750 V d.c. (IEC)	100	380	35
125	645			42	170M1771	170M1786
160	1350			47	170M1772	170M1787
200	2550			54	170M1773	170M1788
250	4950			62	170M1774	170M1789
315	9350			72	170M1775	170M1790
350	12,000			78	170M1776	170M1791
800 V d.c. (UL)	400		18,500	80	170M1777	170M1792
	450		27,000	85	170M1778	170M1793
	500		37,500	90	170M1779	170M1794
	550		48,500	95	170M1780	170M1795
	630		69,500	105	170M1781	170M1796

Data sheets: 170K6422 (Size 000), 170K6426 (Size 230)

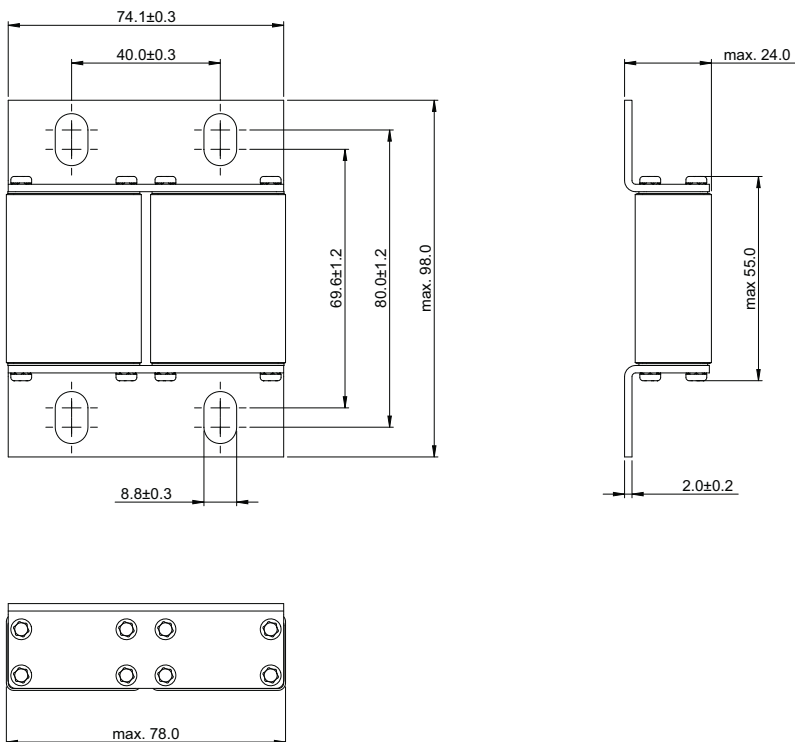
Square body fuse links

170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Dimensions (mm) - Size 000



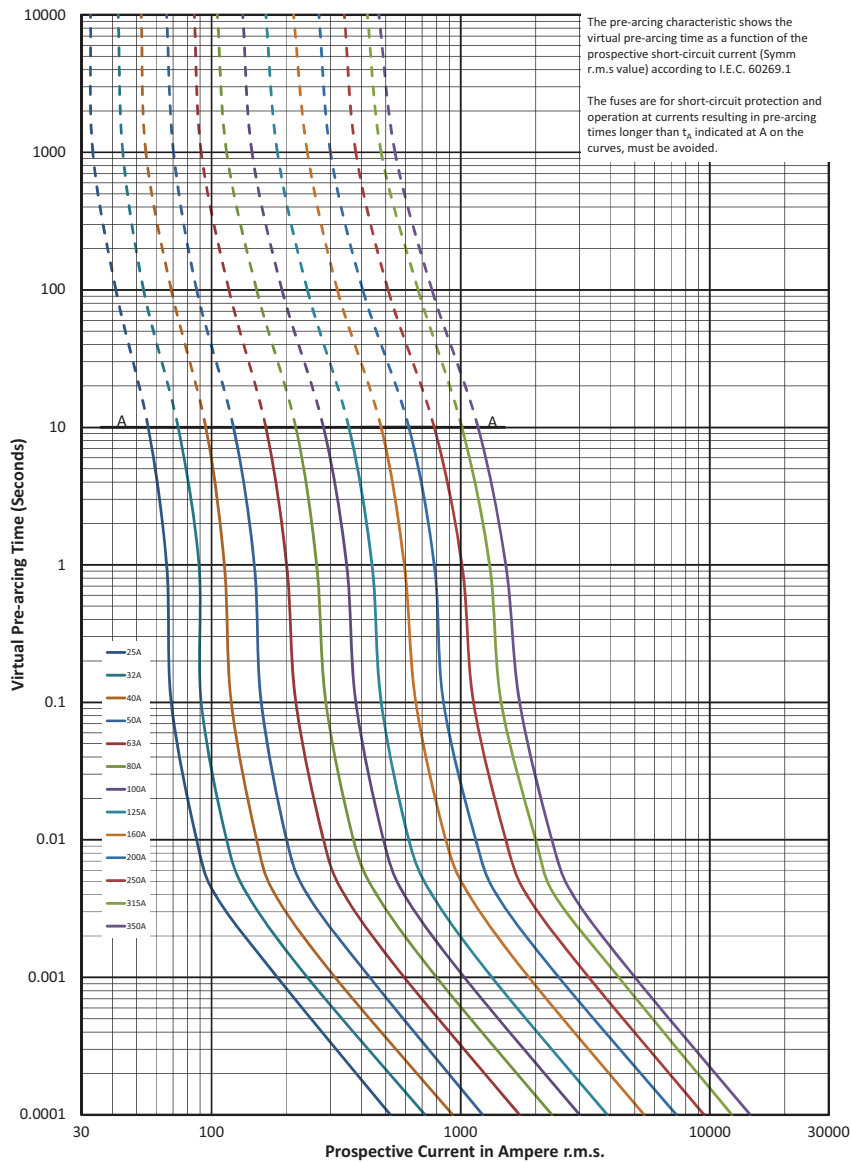
Dimensions (mm) - Size 230



Data sheets: 170K6422 (Size 000), 170K6426 (Size 230)

170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Time-current curve - Size 000, 25 A to 350 A

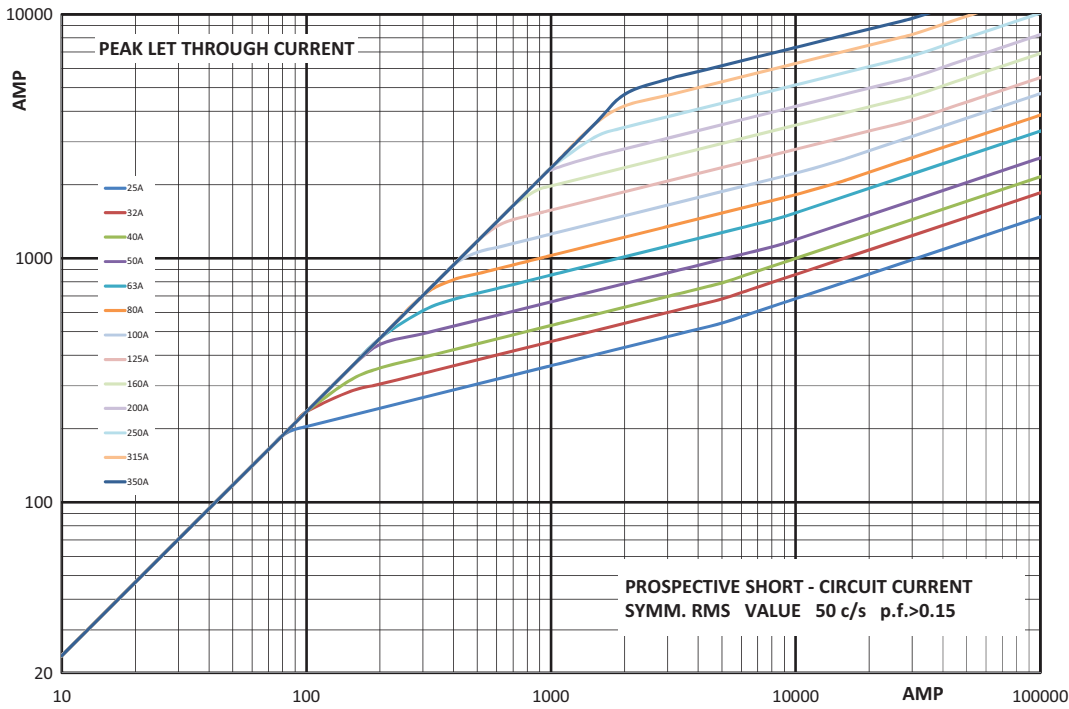


$K_b = 1$ $N = 1,6$

Square body fuse links

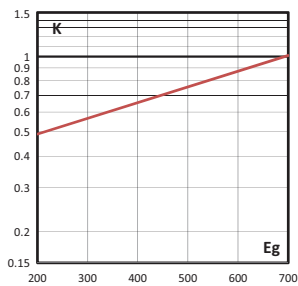
170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Cut-off curve - Size 000, 25 A to 350 A



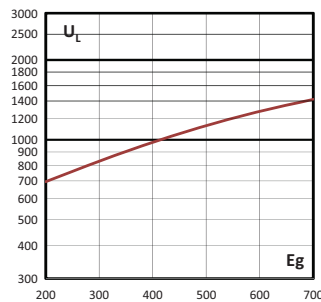
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E_g, (RMS).



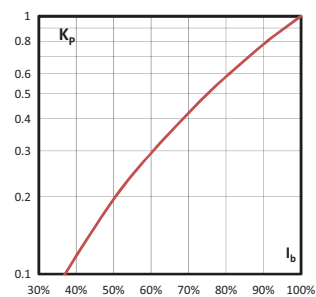
Arc voltage

This curve gives the peak arc voltage, U_L, which may appear across the fuse during its operation as a function of the applied working voltage, E_g, (RMS) at a power factor of 15 percent.



Watts losses

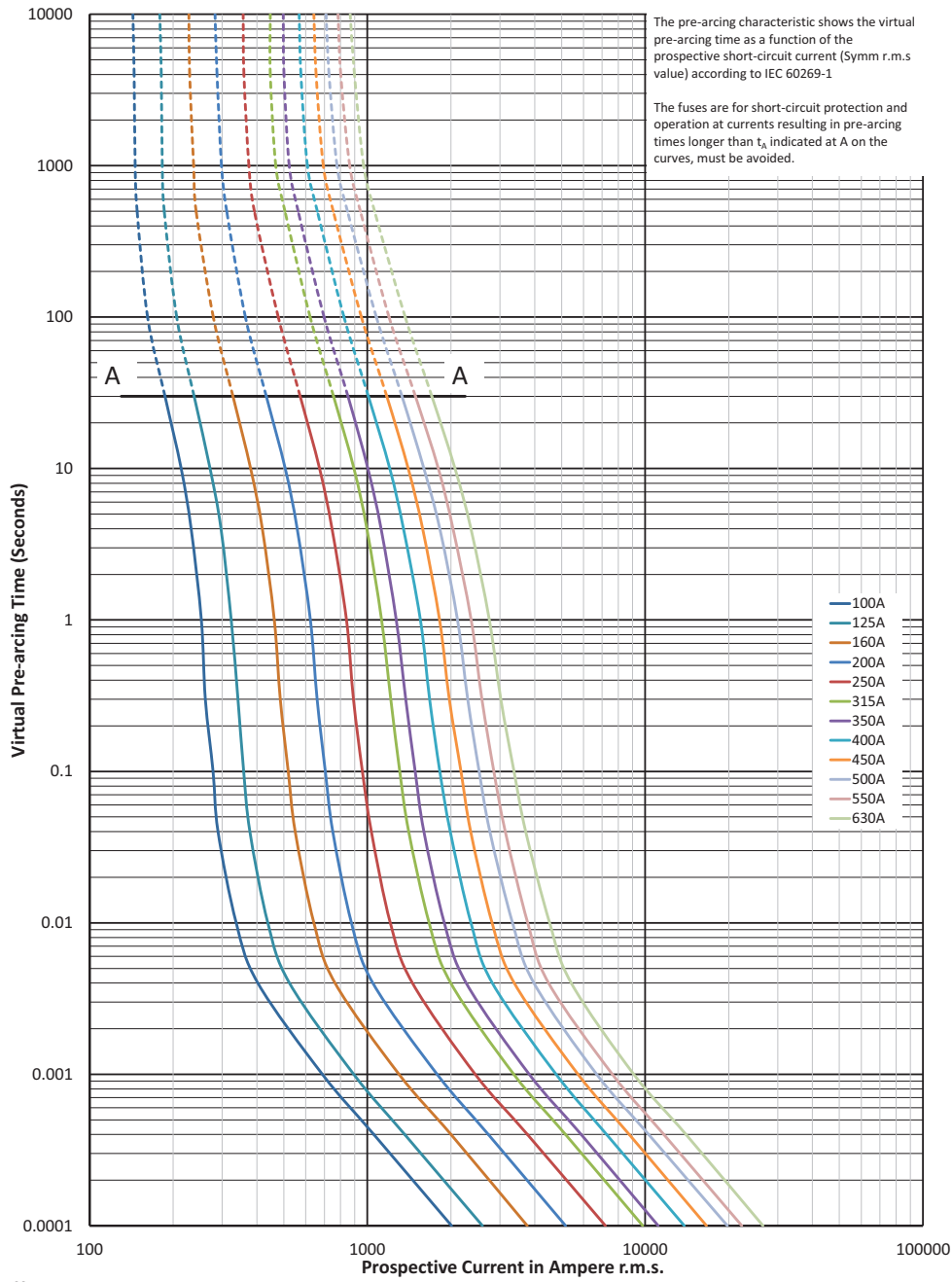
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p, is given as a function of the RMS load current, I_b, in percent of the rated current.



Data sheets: 170K6422 (Size 000), 170K6426 (Size 230)

170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Time-current curve - Size 230, 100 A to 630 A

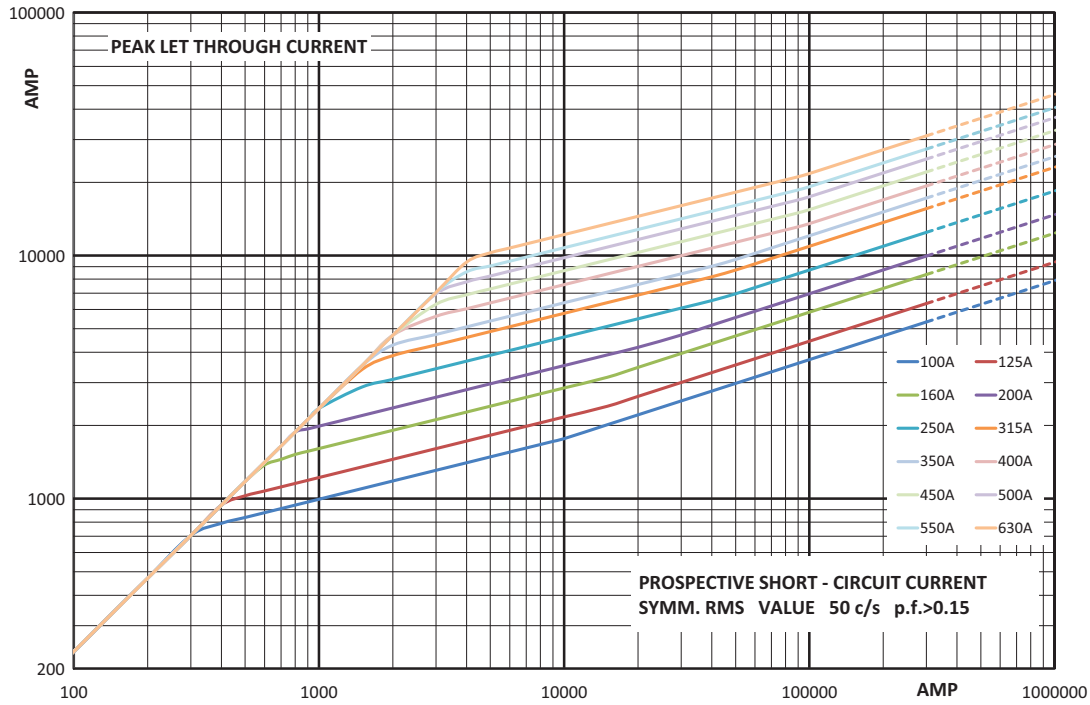


Data sheets: 170K6422 (Size 000), 170K6426 (Size 230)

Square body fuse links

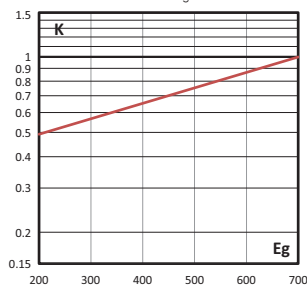
170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Cut-off curve - Size 230, 100 A to 630 A



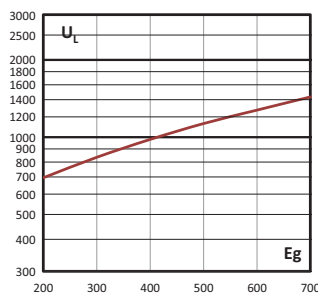
Total clearing I^2t

The total clearing I^2t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I^2t is found by multiplying by correction factor, K , given as a function of applied working voltage, E_g , (RMS).



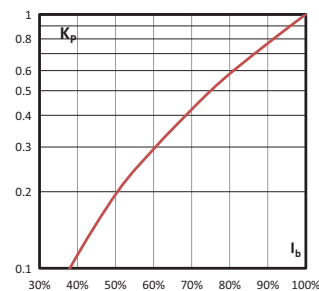
Arc voltage

This curve gives the peak arc voltage, U_L , which may appear across the fuse during its operation as a function of the applied working voltage, E_g , (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p , is given as a function of the RMS load current, I_b , in percent of the rated current.



Data sheets: 170K6422 (Size 000), 170K6426 (Size 230)

170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Specifications

Description

High speed bolted tags high speed fuse links for the protection of IGBT modules, optimised for use in IGBT inverter circuits with DC link rated voltages up to 1000 V d.c.. Low inductance $\leq 20\text{nH}$.

Technical data

- Rated voltage: 1000 V d.c. tested at 1000 V d.c. according to UL 248-1
- Rated current: 25 A to 500 A
- Breaking capacity: 50 kA DC (1ms tc UL)
- Operating class: aR

Standards / Agency information

UL DC Recognised, 1000 V d.c. L/R 1mS max.
CE



Catalogue numbers

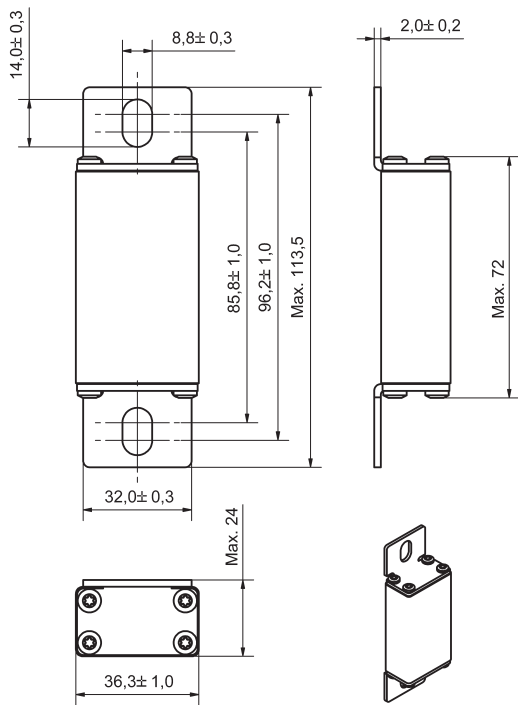
Fuse link body size	Rated voltage	Rated current (Amps)	I ² t (A ² Sec) Pre-arcing	Watts loss (W)	Catalogue numbers			
					-FU/90	-FN/90		
000	1000 V d.c. (UL)	25	19	14	170M1802	170M1842		
		32	34	17	170M1803	170M1843		
		40	61	20	170M1804	170M1844		
		50	135	21	170M1805	170M1845		
		63	245	22	170M1806	170M1846		
		80	505	27	170M1807	170M1847		
		100	1050	32	170M1808	170M1848		
		125	1900	34	170M1809	170M1849		
		160	4050	37	170M1810	170M1850		
		200	8500	43	170M1811	170M1851		
		225	12,000	45	170M1812	170M1852		
		250	16,000	48	170M1813	170M1853		
		230	1000 V d.c. (UL)	100	600	38	170M1824	170M1860
				125	1200	42	170M1825	170M1861
				160	2550	48	170M1826	170M1862
200	4650			55	170M1827	170M1863		
250	9300			62	170M1828	170M1864		
315	18,500			68	170M1829	170M1865		
350	24,500			75	170M1830	170M1866		
400	37,500			80	170M1831	170M1867		
450	52,000			85	170M1832	170M1868		
500	69,500			90	170M1833	170M1869		

Data sheets: 170K6680 (Size 000), 170K6682 (Size 230)

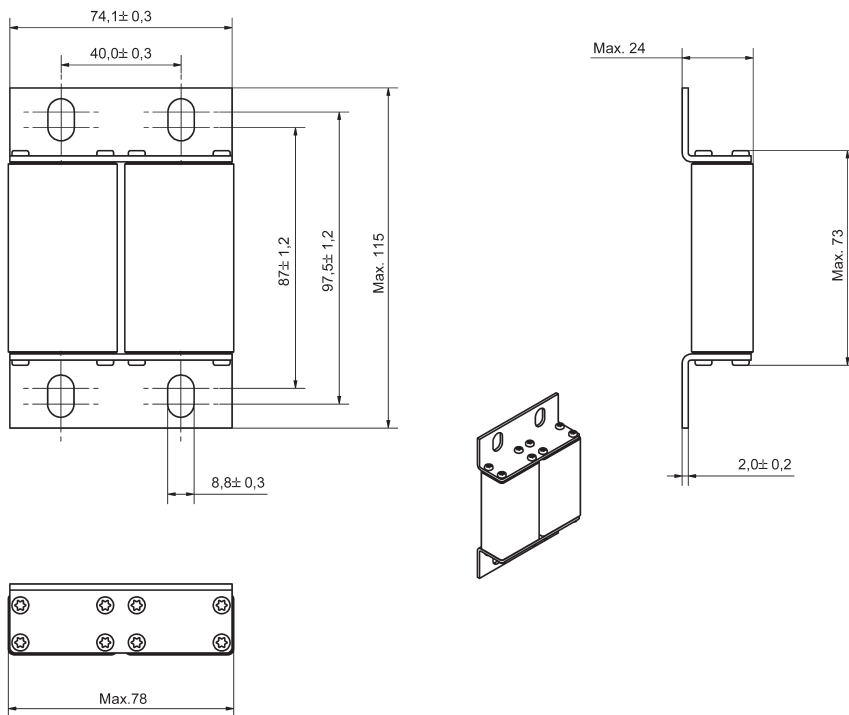
Square body fuse links

170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Dimensions (mm) - Size 000



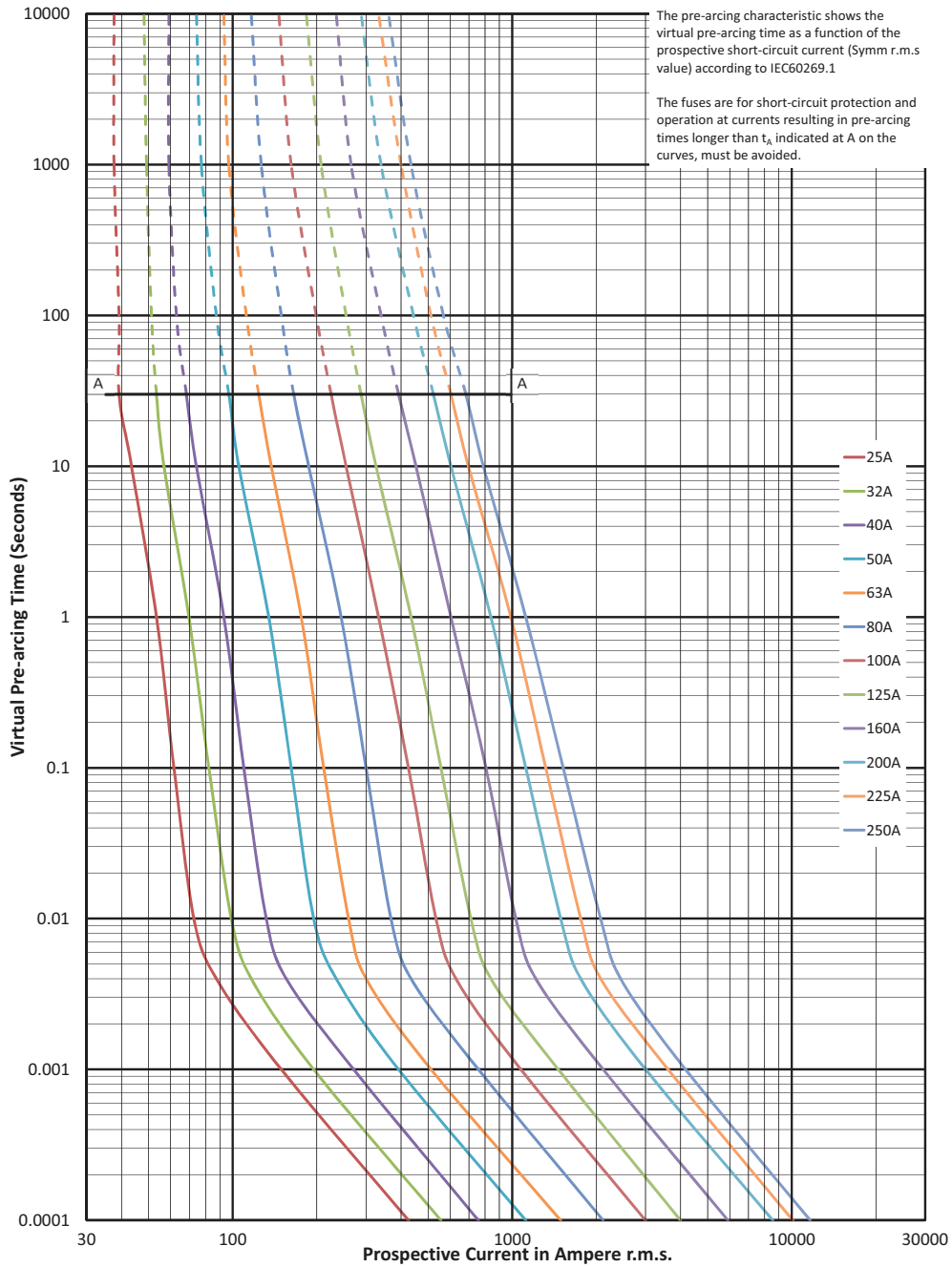
Dimensions (mm) - Size 230



Data sheets: 170K6680 (Size 000), 170K6682 (Size 230)

170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Time-current curve - Size 000, 25 A to 250 A

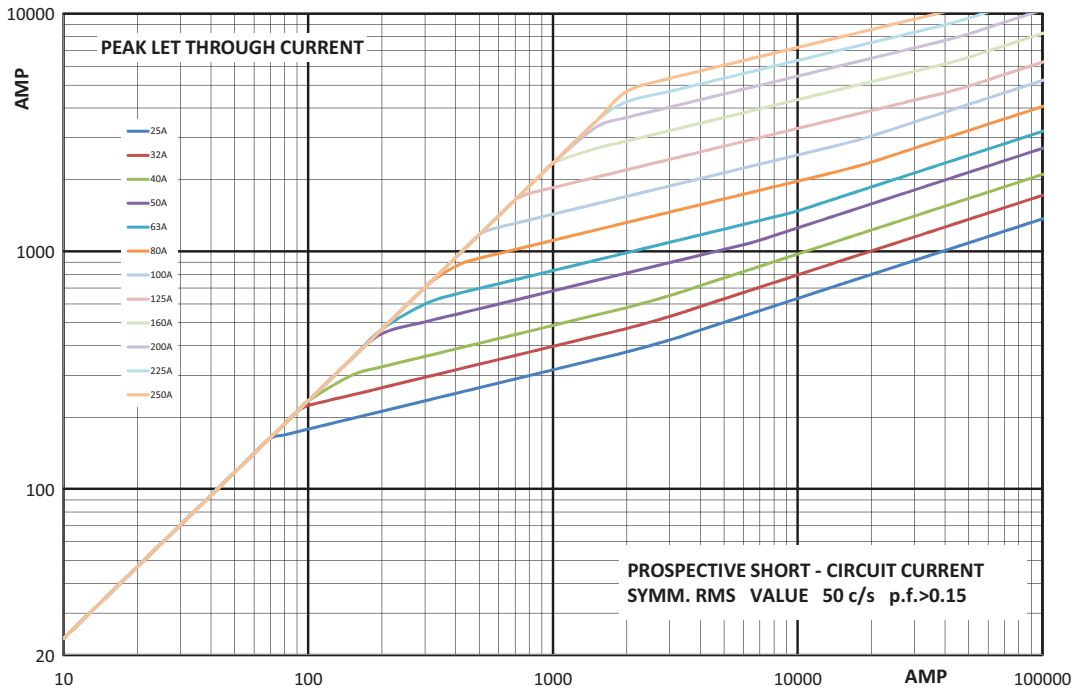


Data sheets: 170K6680 (Size 000), 170K6682 (Size 230)

Square body fuse links

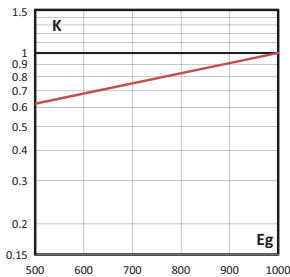
170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Cut-off curve - Size 000, 25 A to 250 A



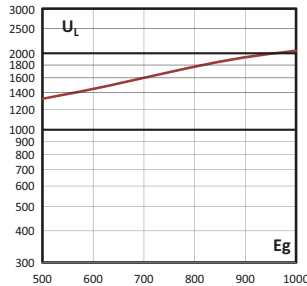
Total clearing I^2t

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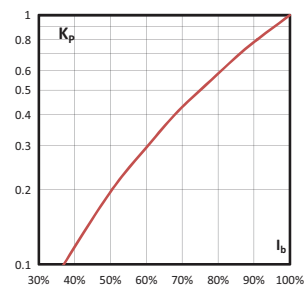
Arc voltage

This curve gives the peak arc voltage, U_L , which may appear across the fuse during its operation as a function of the applied working voltage, E_g , (RMS) at a power factor of 15 percent.



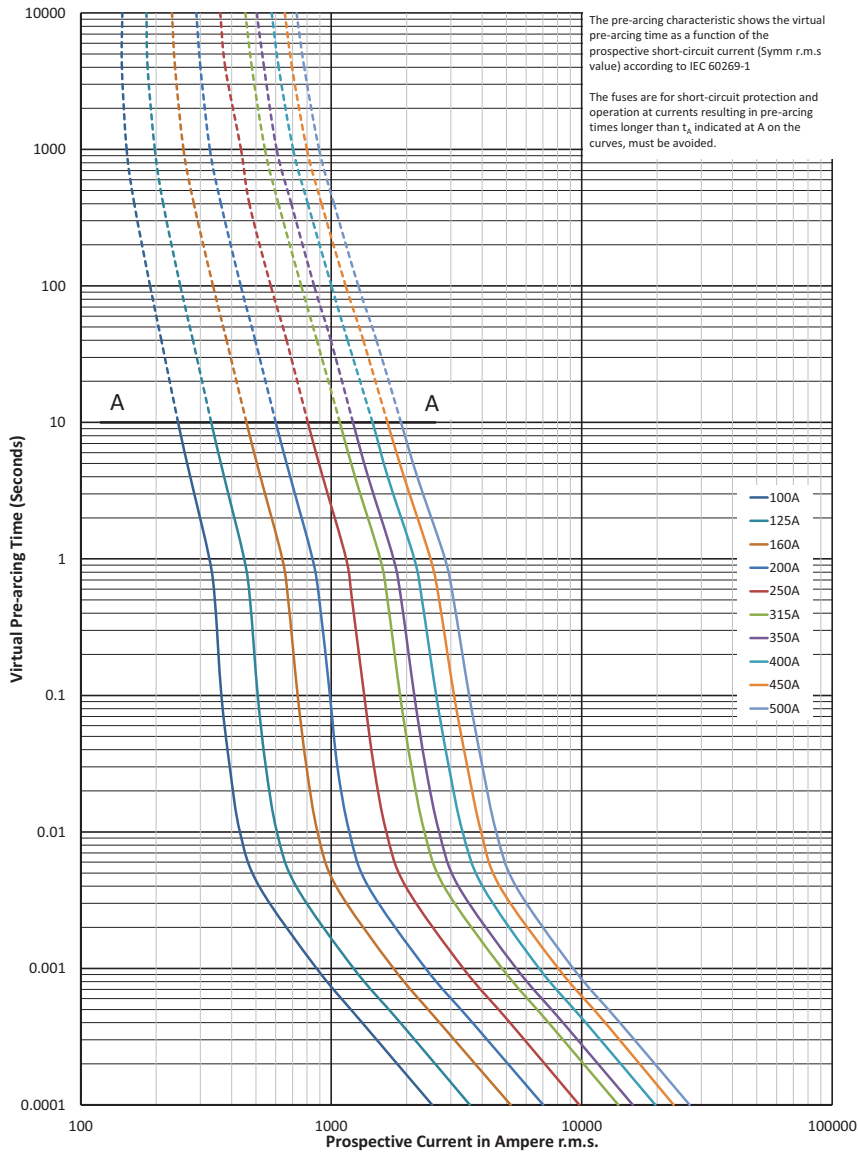
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p , is given as a function of the RMS load current, I_b , in percent of the rated current.



170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Time-current curve - Size 230, 100 A to 500 A

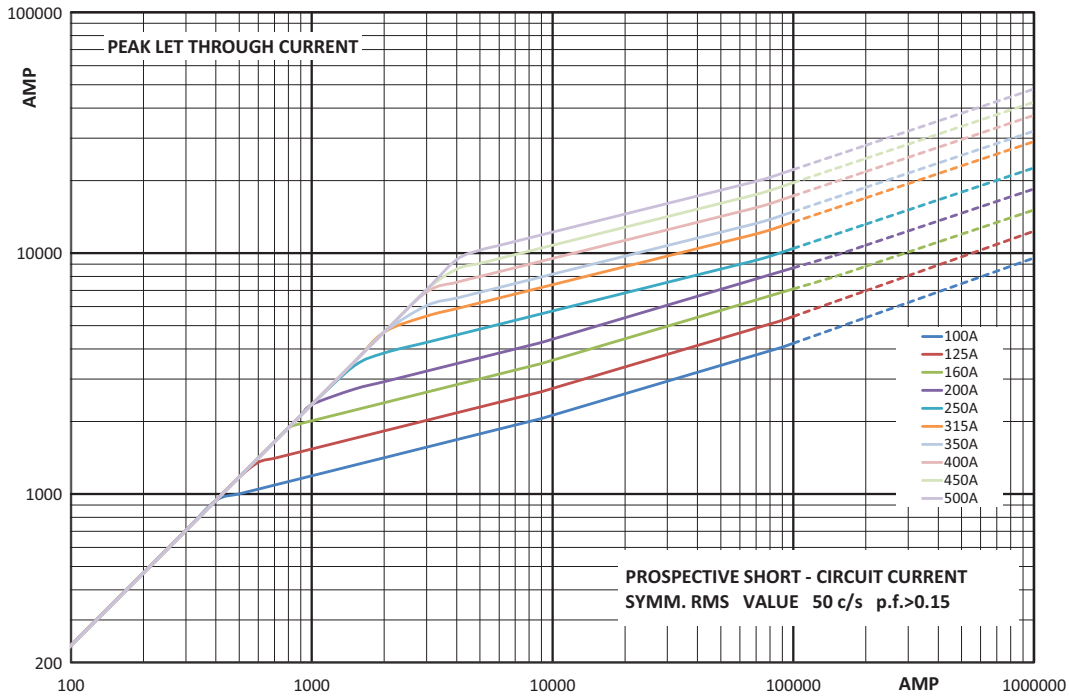


Data sheets: 170K6680 (Size 000), 170K6682 (Size 230)

Square body fuse links

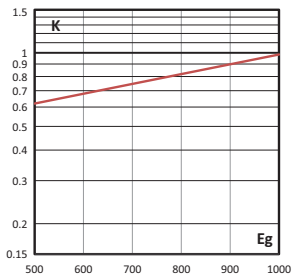
170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Cut-off curve - Size 230, 100 A to 500 A



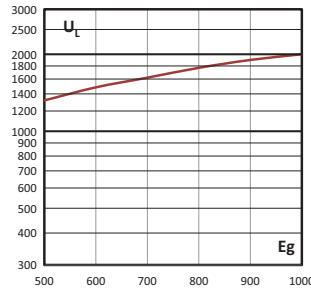
Total clearing I²t

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Arc voltage

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Watts losses

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