170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Specifications

Description

Square body DIN 43653 bolted tags high speed fuse links, for the protection of DC common bus, DC drives, power converters / rectifiers and reduced rated voltage starters.

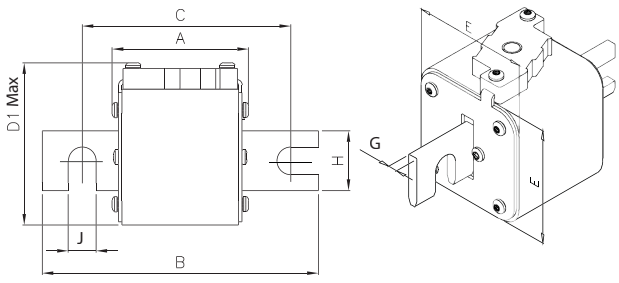
Technical data

- Rated voltage:
  - 1000 V a.c. (IEC, 50 A to 1250 A), 900 V a.c. (IEC, 1400 A)
  - 1000 V a.c. (UL size 2, size 3, 315 A to 1100 A only)
- Rated current: 50 A to 1400 A
- Breaking Capacity:
  - 125kA RMS Sym. AC
  - Size 1: 50 kA for 750 V d.c.
- Operating Class: aR

Standards/Agency Information

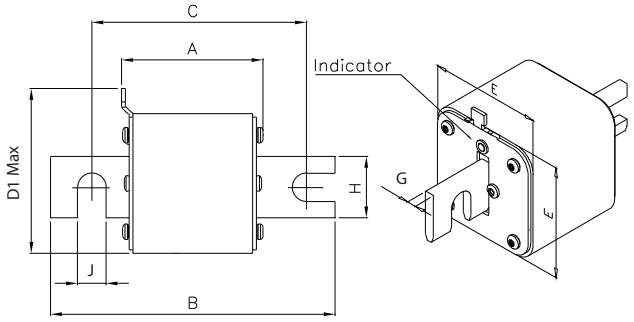
CE, Designed and tested to IEC60269 Part 4, UL Recognised (only sizes 2 and 3), CCC only size 3 (315 A to 1100 A)

Dimensions (mm) -KN/110



Size	A	B	C	D1 (max)	E	G	H	J
1*KN/110	80	138	108	61	43	6	22	11
1KN/110	80	138	108	69	51	6	25	11
2KN/110	80	138	108	77	59	6	25	11
3KN/110	81	139	108	92	74	6	30	11

Dimensions (mm) -TN/110



Size	A	B	C	D1 (max)	E	G	H	J
1*TN/110	80	138	108	61	43	6	22	11
1TN/110	80	138	108	69	51	6	25	11
2TN/110	80	138	108	75	59	6	25	11
3TN/110	81	139	108	90	74	6	30	11

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

Square body fuse links

170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Catalogue numbers

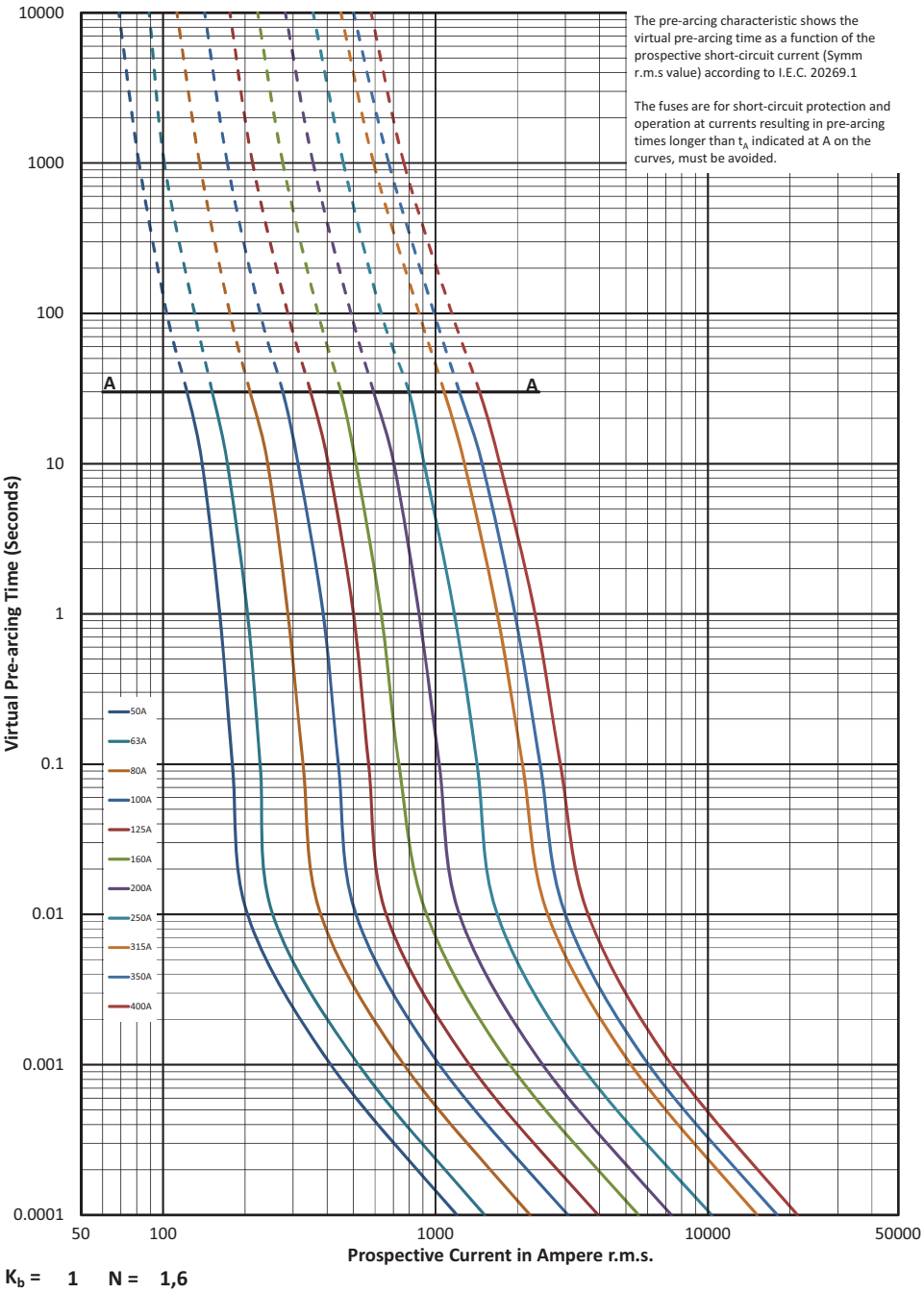
Fuse link body size	Rated voltage	Rated current (Amps)	I²t (A² Sec) Pre-arcing	I²t (A² Sec) Clearing at rated voltage	Watts loss (W)	Catalogue numbers -KN/110 Type K indicator for micro	Catalogue numbers -TN/110 Type T indicator for micro
1*	1000 V a.c. (IEC)	50	135	815	20	170M3965	170M3981
		63	215	1300	25	170M3966	170M3982
		80	460	2750	30	170M3967	170M3983
		100	860	5100	35	170M3968	170M3984
		125	1450	8600	40	170M3969	170M3985
		160	2850	17,500	45	170M3970	170M3986
		200	4950	29,500	50	170M3971	170M3987
		250	9550	57,000	55	170M3972	170M3988
		315	21,500	130,000	65	170M3973	170M3989
		350	29,000	175,000	70	170M3974	170M3990
		400	42,000	250,000	75	170M3975	170M3991
1	1000 V a.c. (IEC) 1000 V a.c. / 750 V d.c. (UL)	160	2200	13,500	40	170M4965	170M4980
		200	4150	24,500	45	170M4966	170M4981
		250	7750	46,000	52	170M4967	170M4982
		315	16,500	98,500	60	170M4968	170M4983
		350	21,500	130,000	65	170M4969	170M4984
		400	31,000	185,000	70	170M4970	170M4985
		450	44,500	265,000	80	170M4971	170M4986
		500	63,000	375,000	85	170M4972	170M4987
		550	84,500	500,000	90	170M4973	170M4988
		630	125,000	755,000	98	170M4974	170M4989
2	1000 V a.c. (IEC and UL)	250	6750	40,000	65	170M5966	170M5981
		315	13,500	81,500	75	170M5967	170M5982
		350	16,500	99,000	80	170M5968	170M5983
		400	26,000	155,000	85	170M5969	170M5984
		450	35,500	210,000	90	170M5970	170M5985
		500	49,500	295,000	95	170M5971	170M5986
		550	66,000	390,000	100	170M5972	170M5987
		630	93,500	555,000	110	170M5973	170M5988
		700	130,000	770,000	115	170M5974	170M5989
		800	195,000	1,200,000	125	170M5975	170M5990
3	1000 V a.c. (IEC and UL)	315	9200	54,500	90	170M8614	170M8629[1]
		350	13,000	77,500	95	170M8615	170M8630[1]
		400	19,000	115,000	105	170M8616	170M8631[1]
		450	27,000	160,000	107	170M8617	170M8632[1]
		500	37,500	225,000	110	170M8618	170M8633[1]
		550	52,000	310,000	115	170M8619	170M8634[1]
		630	82,500	490,000	120	170M8620	170M8635[1]
		700	115,000	700,000	125	170M8621	170M8636[1]
		800	170,000	1,050,000	135	170M8622	170M8637[1]
		900	250,000	1,500,000	145	170M8623	170M8638[1]
		1000	340,000	2,050,000	150	170M8624	170M8639[1]
		1100	460,000	2,750,000	155	170M8625	170M8640[1]
	1000 V a.c. (IEC)	1250	575,000	3,400,000	175	170M8626	170M8641
	900 V a.c. (IEC)	1400	795,000	4,200,000	185	170M8627	170M8642

[1] Rated at 900 V d.c. 8XIn 90 kA

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 1* - 50 A to 400 A

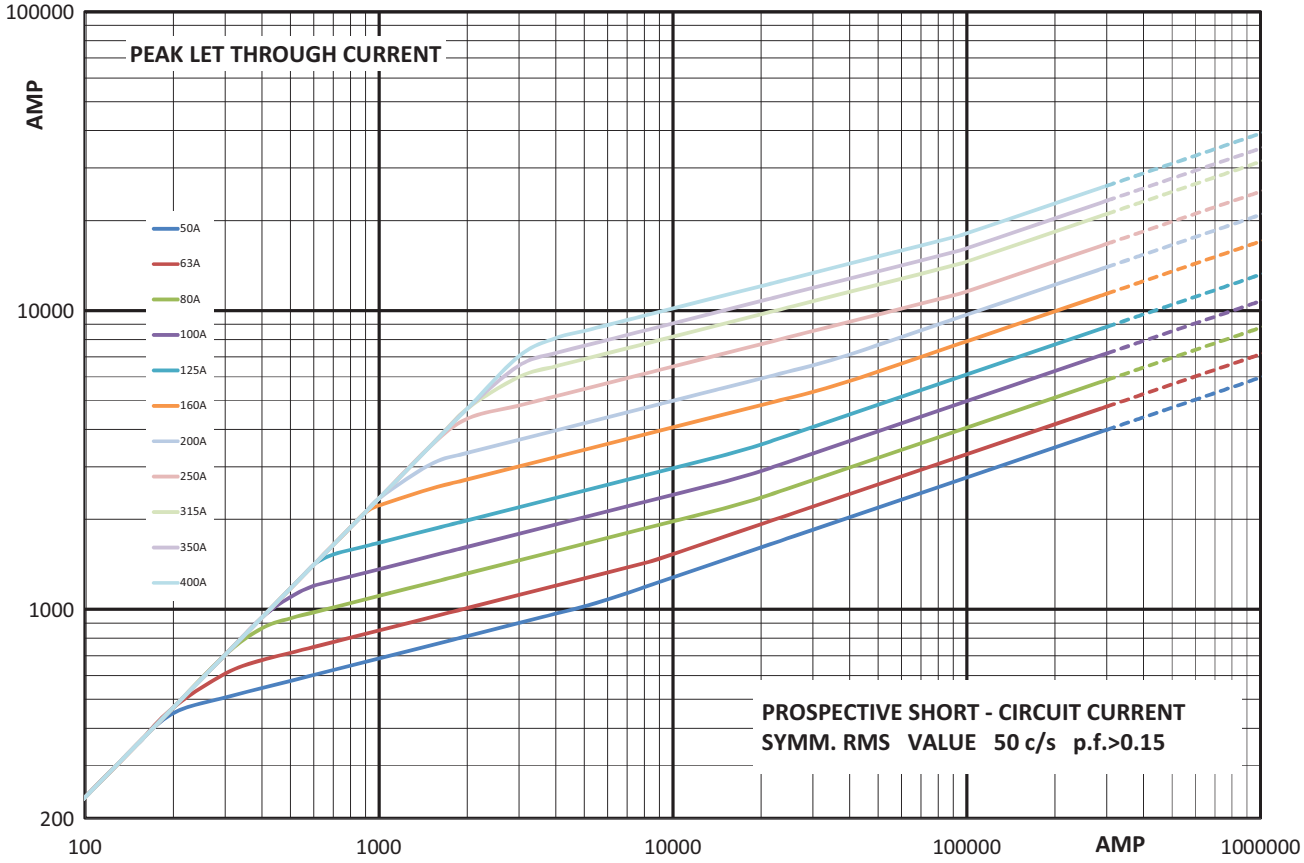


K_b = 1 N = 1,6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

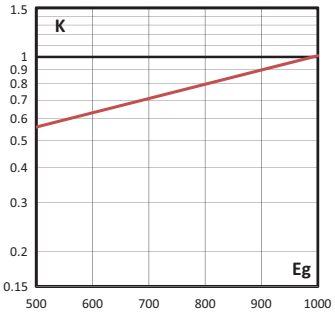
170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 1*, 50 A to 400 A



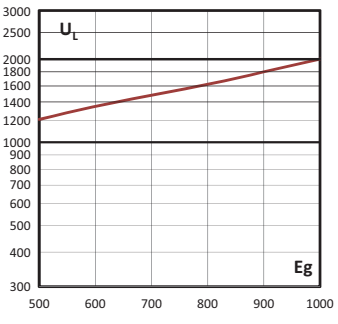
Total clearing I^2t

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).



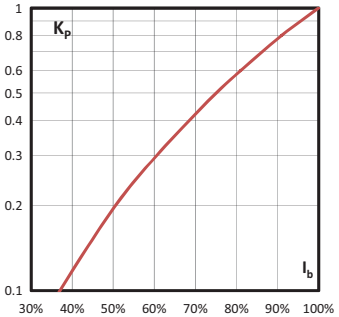
Arc voltage

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

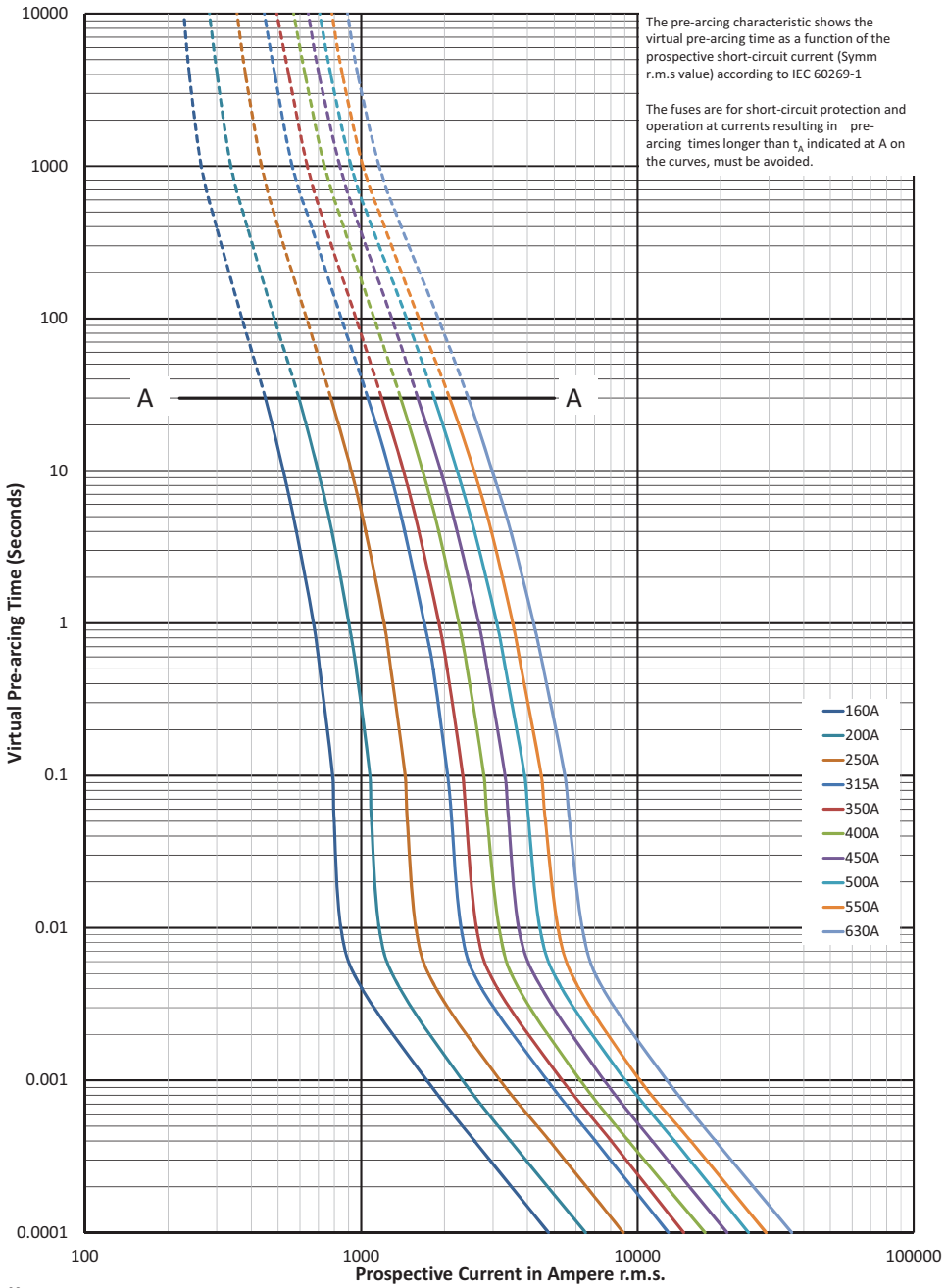
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p , is given as a function of the RMS load current, I_b , in percent of the rated current.



Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 1, 160 A to 630 A

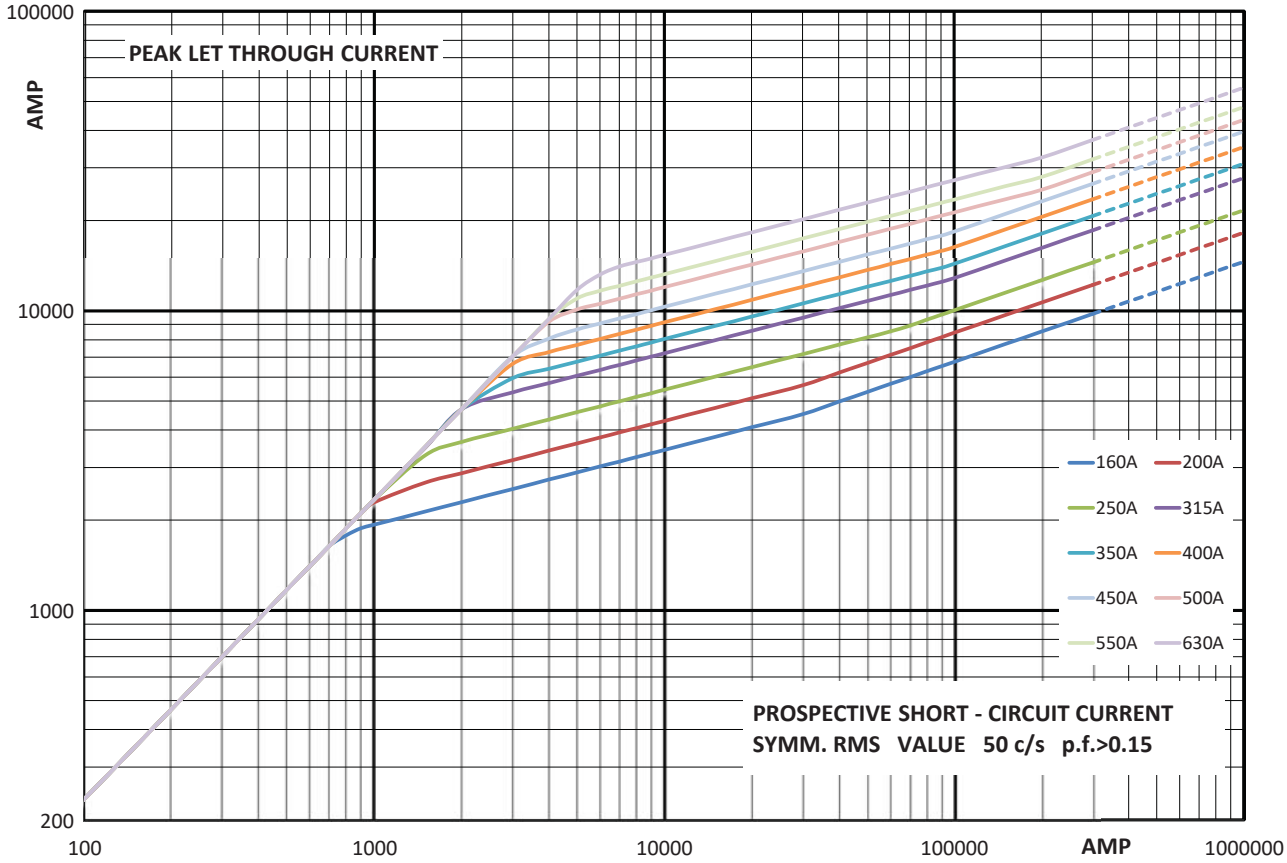


K_b = 1 N = 1.6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

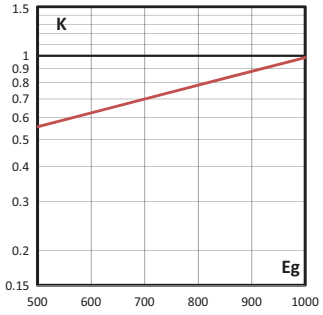
170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 1, 160 A to 630 A



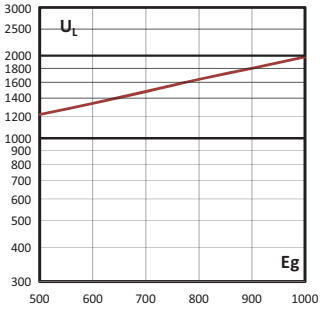
Total clearing I²t

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).



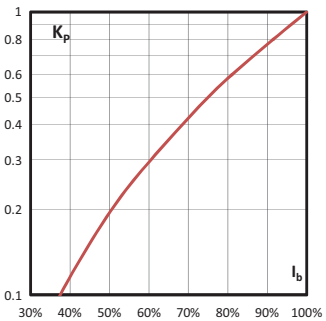
Arc voltage

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

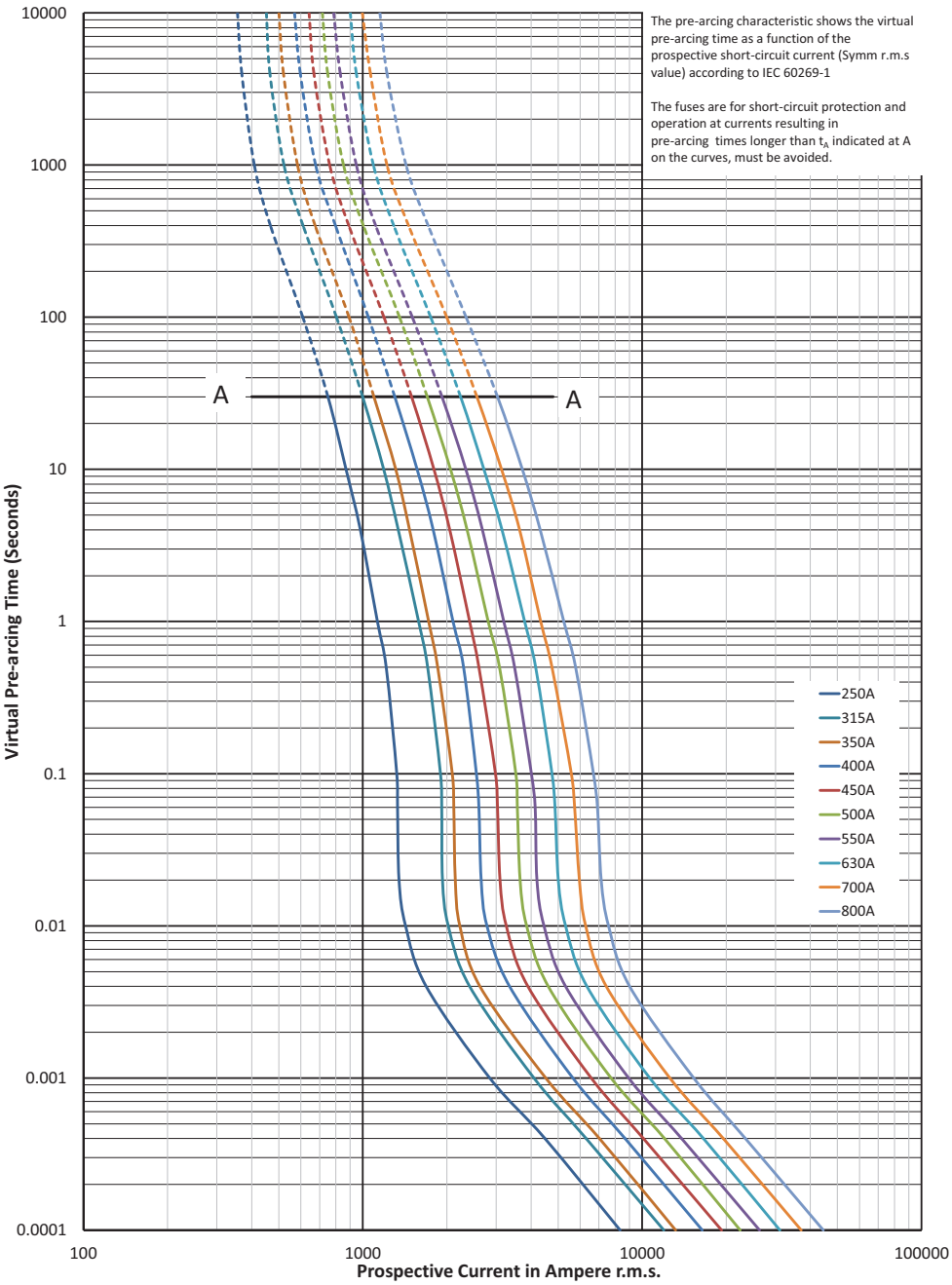
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p, is given as a function of the RMS load current, I_b, in percent of the rated current.



Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 2, 250 A to 800 A

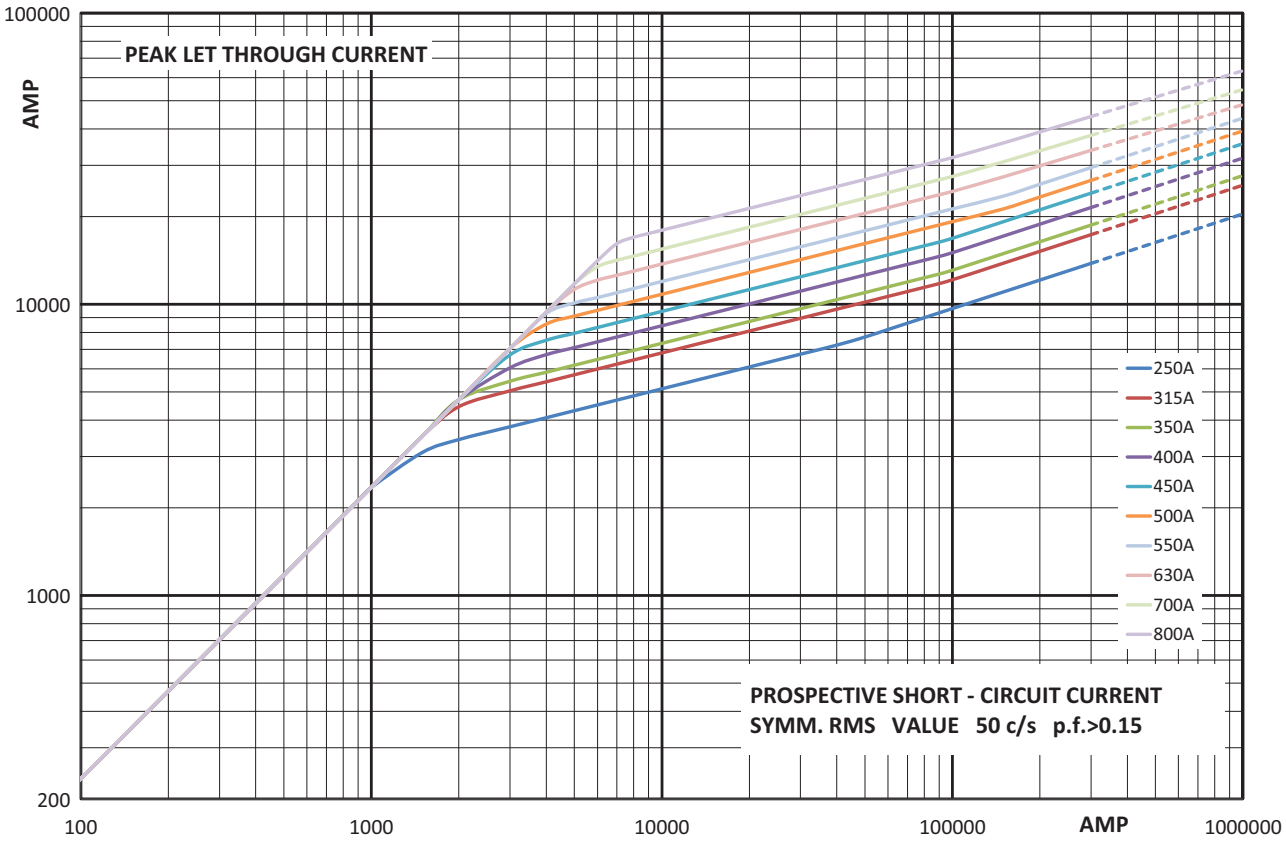


K_b = 1 N = 1.6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

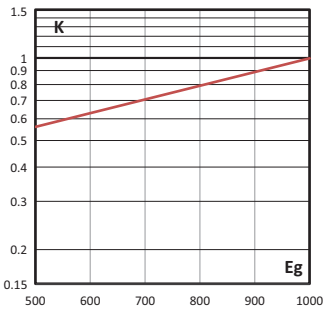
170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 2, 250 A to 800 A



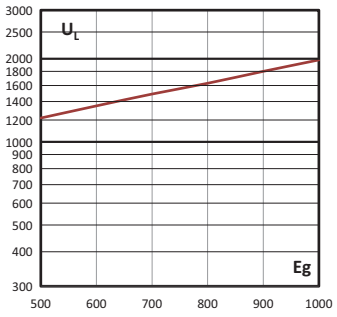
Total clearing I²t

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).



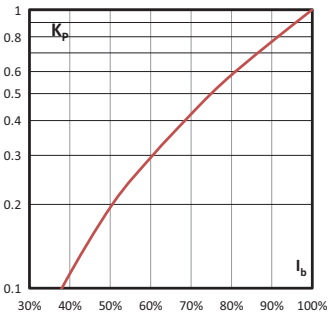
Arc voltage

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

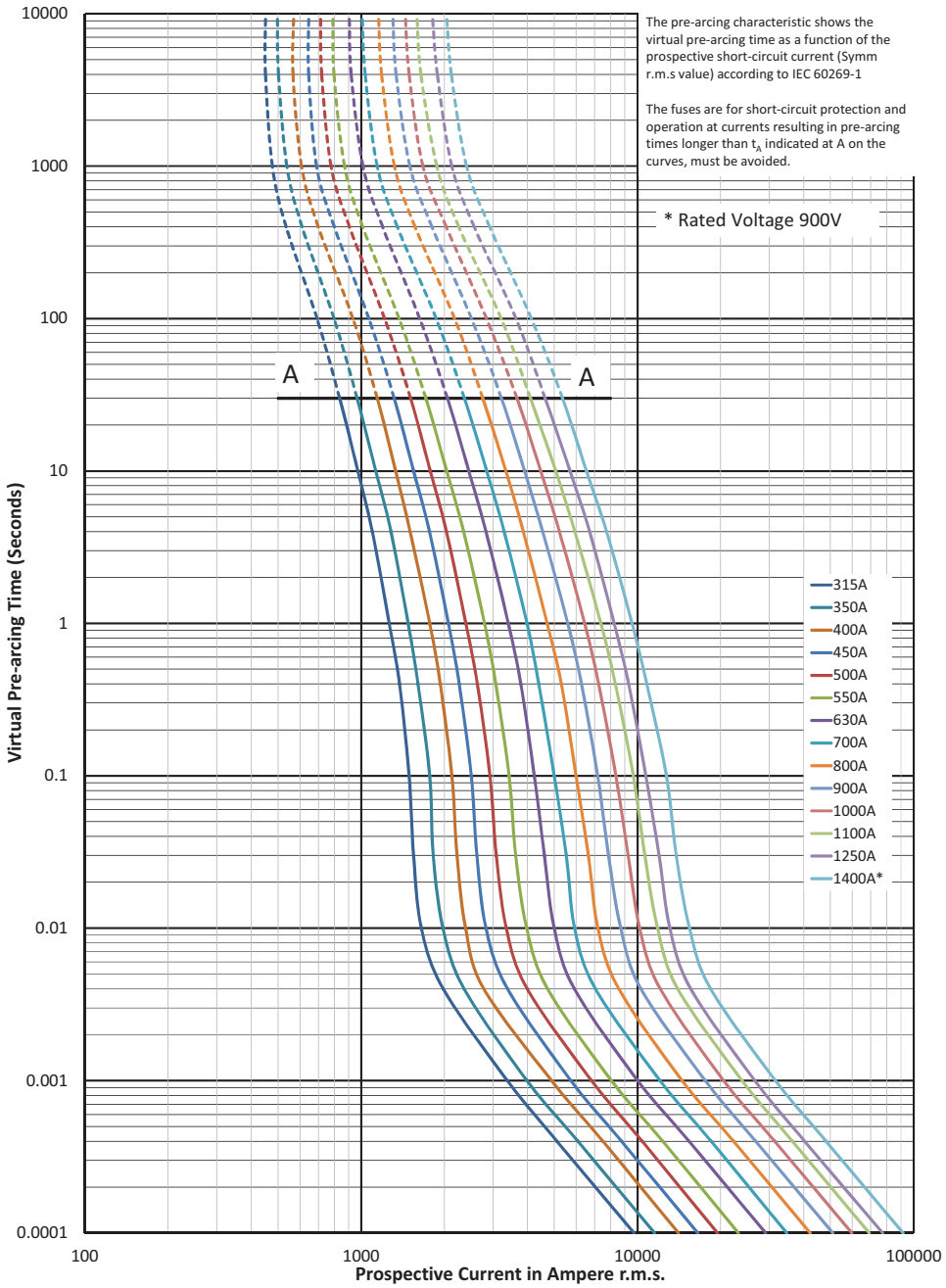
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p, is given as a function of the RMS load current, I_b, in percent of the rated current.



Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 3, 315 A to 1400 A

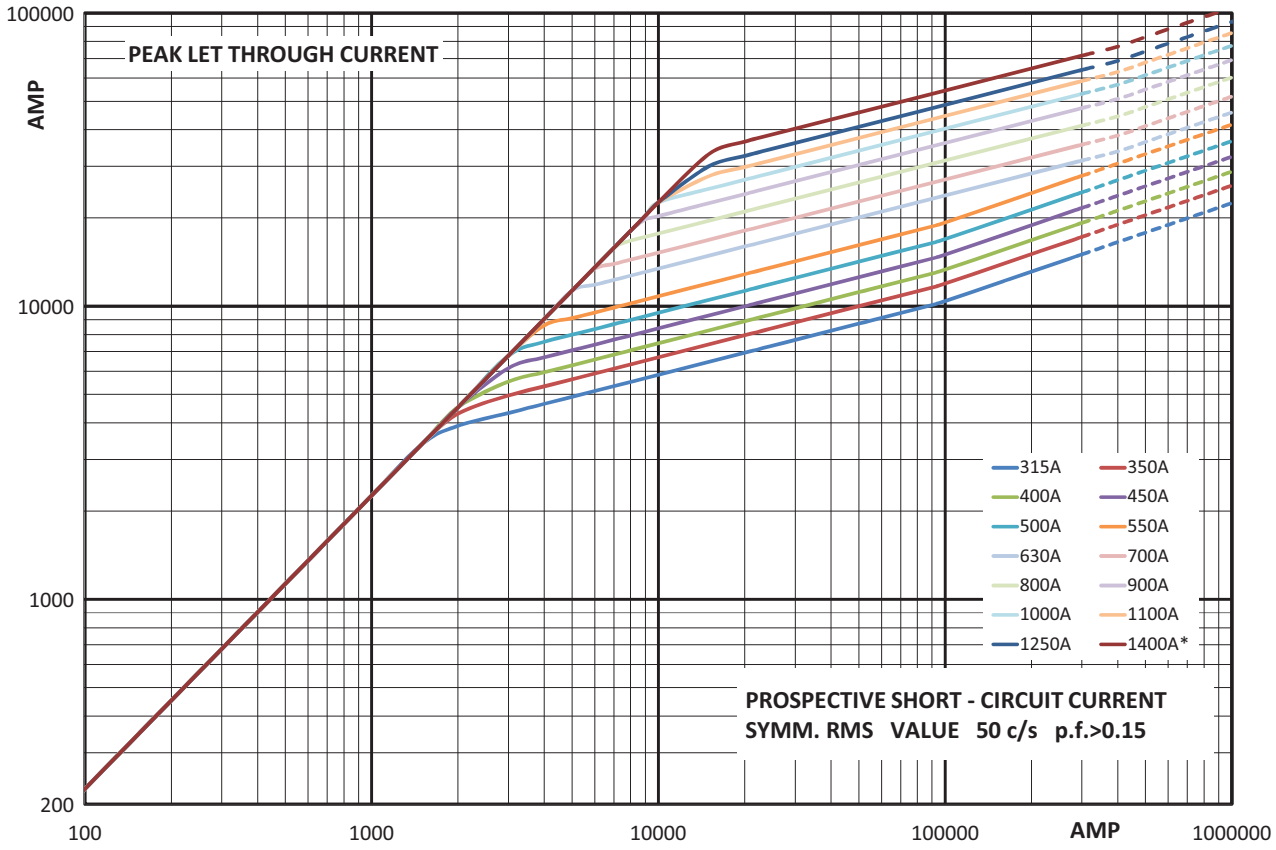


K_b = 1 N = 1.6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

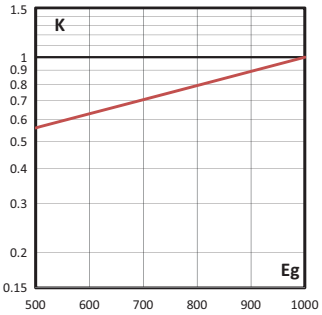
170M - Sizes 1* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 3, 315 A to 1400 A



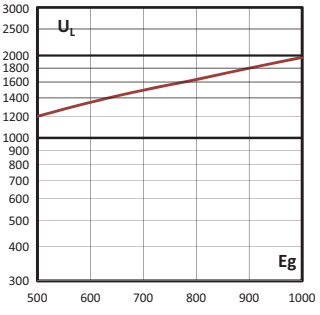
Total clearing I^2t

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).



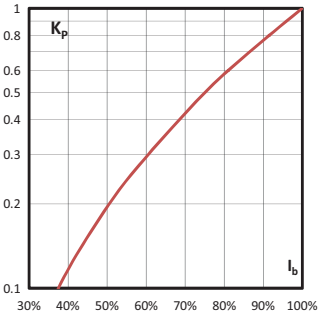
Arc voltage

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: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Specifications

Description

Square body flush end contact high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

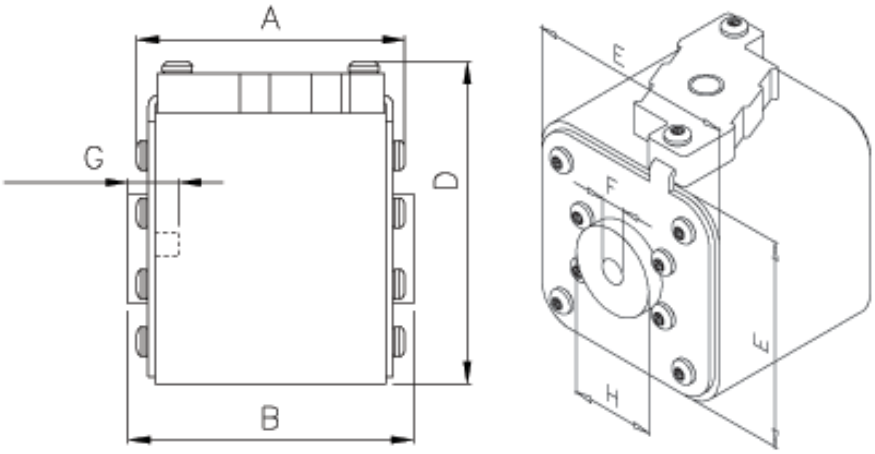
Technical data

- Rated voltage:
  - 1000 V a.c. (IEC, 50 A to 1250 A)
  - 1000 V a.c. (UL, 250 A to 1100 A)
  - 900 V a.c. (IEC, 1400 A)
- Rated current: 50 A to 1400 A
- Breaking capacity:
  - 125kA RMS Sym. AC
  - Size 1 DC 750 V d.c. 50 kA IR
- Operating class: aR

Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4, UL Recognised for size 2 and 3 (only up to 1100 A)

Dimensions (mm)



Size	Type	A	B	D (max)	E	F	F[1] (in)	G (min)	H
1*	BKN/75 + GKN/75	72.5	74	61	43	M8	5/16"18 UNC-2B	5	17.5
1	BKN/75 + GKN/75	73.2	74	69	52	M8	5/16" 18 UNC-2B	8	20
2	BKN/75 + GKN/75	73.2	74.4	77	59	M10	3/8" 16 UNC-2B	10	24.5
3	BKN/75 + GKN/75	73.3	75.4	92	74	M12	½" 13 UNC-2B	10	30
3	BKN/90 + GKN/90	80.3	91.4	92	74	M12	½"13 UNC-2B	10	30

[1] Valid for fuses type -GKN/-.

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

Square body fuse links

170M - sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Catalogue numbers

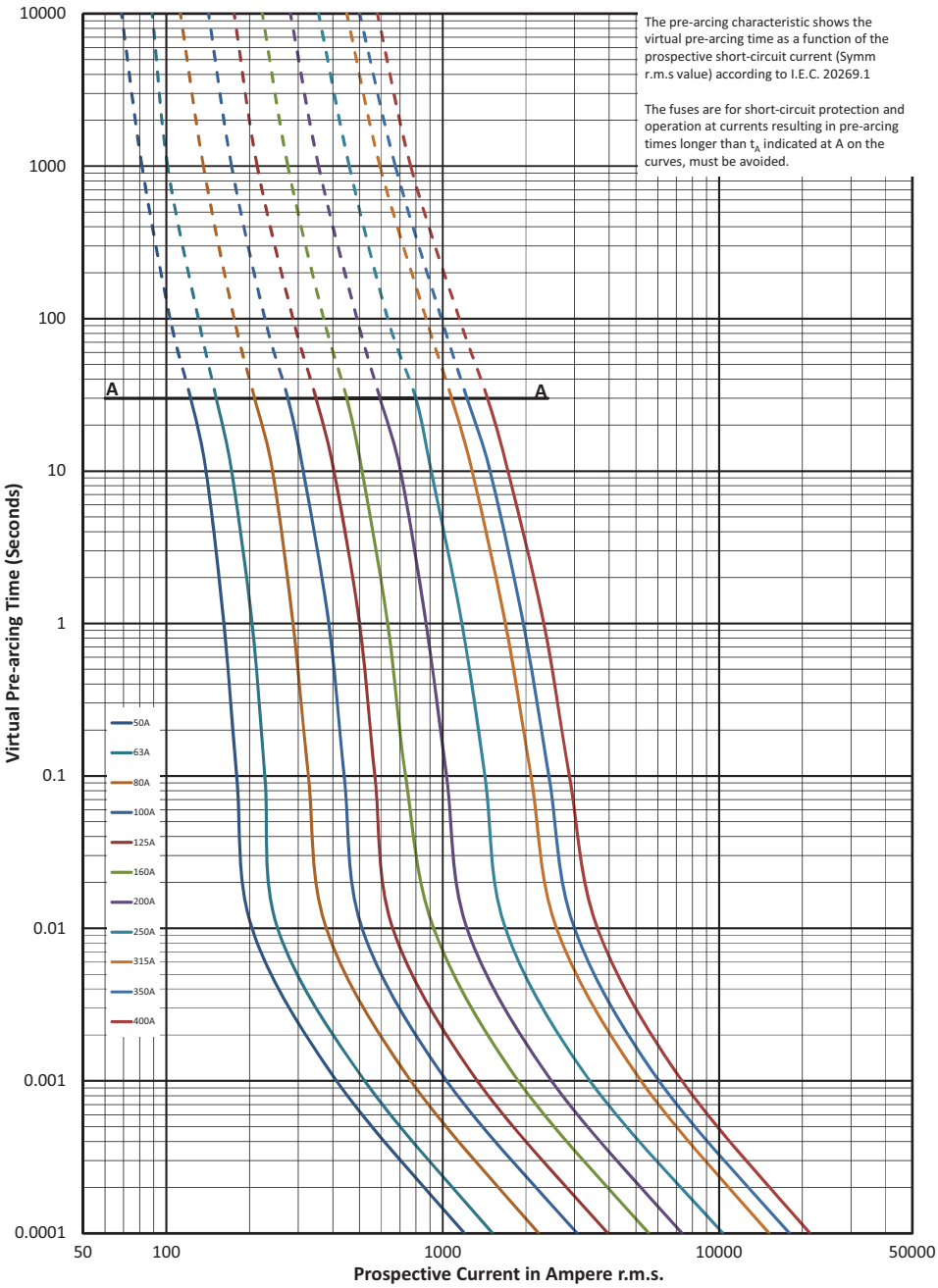
Fuse link body size	Rated voltage	Rated current (Amps)	I²t (A² Sec) Pre-arcing	I²t (A² Sec) Clearing at rated voltage	Watts loss (W)	Catalogue numbers -BKN/- Type K indicator for micro	Catalogue numbers -GKN/- Type K indicator for micro
1*	1000 V a.c. (IEC)	50	135	815	20	170M3951	170M3921
		63	215	1300	25	170M3952	170M3922
		80	460	2750	30	170M3953	170M3923
		100	860	5100	35	170M3954	170M3924
		125	1450	8600	40	170M3955	170M3925
		160	2850	17,500	45	170M3956	170M3926
		200	4950	29,500	50	170M3957	170M3927
		250	9550	57,000	55	170M3958	170M3928
		315	21,500	130,000	65	170M3959	170M3929
		350	29,000	175,000	70	170M3960	170M3930
		400	42,000	250,000	75	170M3961	170M3931
1	1000 V a.c. (IEC) 1000 V a.c. / 750 V d.c. (UL)	160	2200	13,500	40	170M4951	170M4921
		200	4150	24,500	45	170M4952	170M4922
		250	7750	46,000	52	170M4953	170M4923
		315	16,500	98,500	60	170M4954	170M4924
		350	21,500	130,000	65	170M4955	170M4925
		400	31,000	185,000	70	170M4956	170M4926
		450	44,500	265,000	80	170M4957	170M4927
		500	63,000	375,000	85	170M4958	170M4928
		550	84,500	500,000	90	170M4959	170M4929
		630	125,000	755,000	98	170M4960	170M4930
2	1000 V a.c. (IEC/UL)	250	6750	40,000	65	170M5952	170M5922
		315	13,500	81,500	75	170M5953	170M5923
		350	16,500	99,000	80	170M5954	170M5924
		400	26,000	155,000	85	170M5955	170M5925
		450	35,500	210,000	90	170M5956	170M5926
		500	49,500	295,000	95	170M5957	170M5927
		550	66,000	390,000	100	170M5958	170M5928
		630	93,500	555,000	110	170M5959	170M5929
		700	130,000	770,000	115	170M5960	170M5930
		800	195,000	1,200,000	125	170M5961	170M5931
3	1000 V a.c. (IEC/UL)	315	9200	54,500	90	170M8600	170M8500
		350	13,000	77,500	95	170M8601	170M8501
		400	19,000	115,000	105	170M8602	170M8502
		450	27,000	160,000	107	170M8603	170M8503
		500	37,500	225,000	110	170M8604	170M8504
		550	52,000	310,000	115	170M8605	170M8505
		630	82,500	490,000	120	170M8606	170M8506
		700	115,000	700,000	125	170M8607	170M8507
		800	170,000	1,050,000	135	170M8608	170M8508
		900	250,000	1,500,000	145	170M8609	170M8509
		1000	340,000	2,050,000	150	170M8610	170M8510
		1100	460,000	2,750,000	155	170M8611	170M8511
	1000 V a.c. (IEC)	1250	575,000	3,400,000	175	170M8612[1]	170M8512[1]
	900 V a.c. (IEC)	1400	795,000	4,200,000	185	170M8613[1]	170M8513[1]

[1] Overall length is 90 mm, for all other fuse links the overall length is 75 mm.

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 1*, 50 A to 400 A



The pre-arcing characteristic shows the virtual pre-arcing time as a function of the prospective short-circuit current (Symm r.m.s value) according to I.E.C. 20269.1

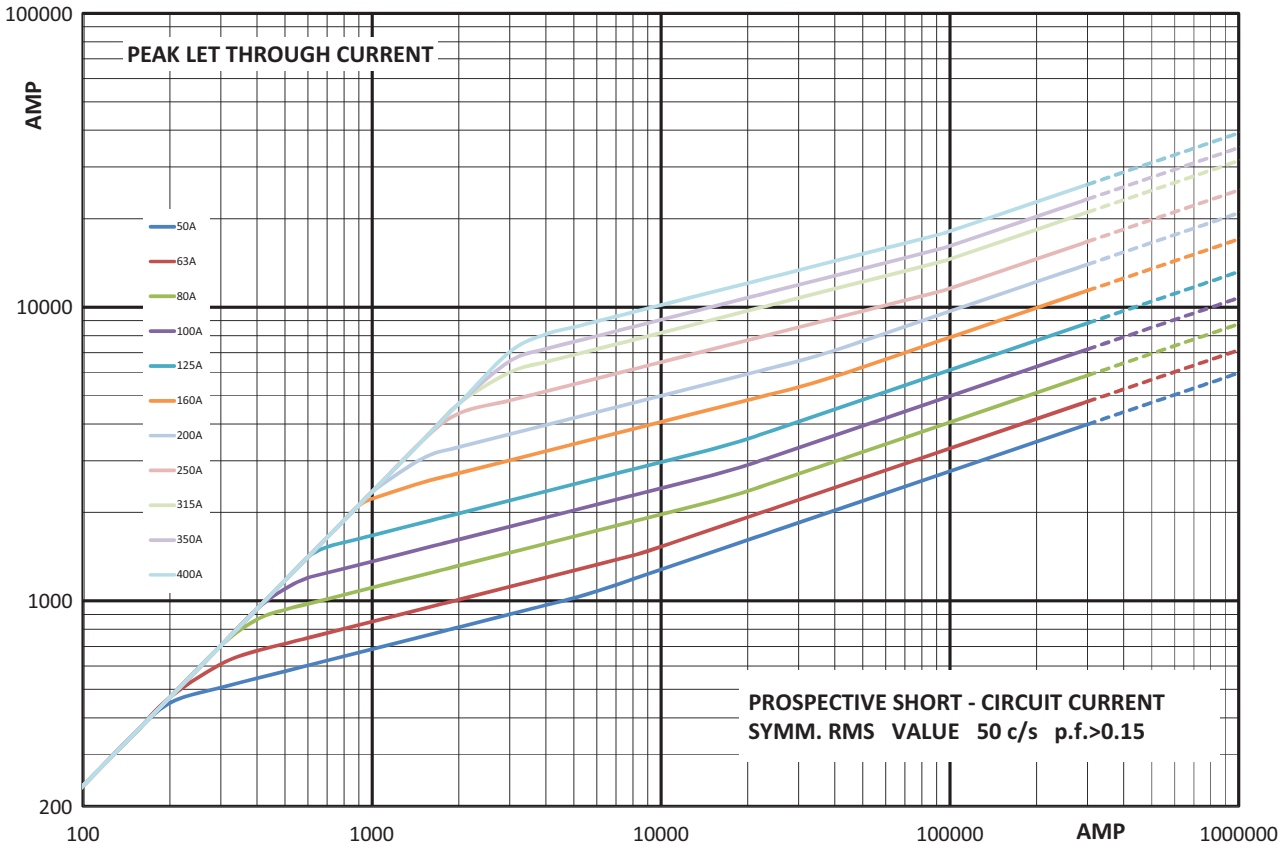
The fuses are for short-circuit protection and operation at currents resulting in pre-arcing times longer than t_A indicated at A on the curves, must be avoided.

K_b = 1 N = 1,6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

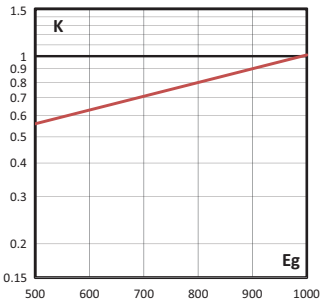
170M - sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 1*, 50 A to 400 A



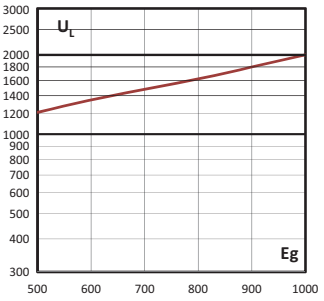
Total clearing I²t

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).



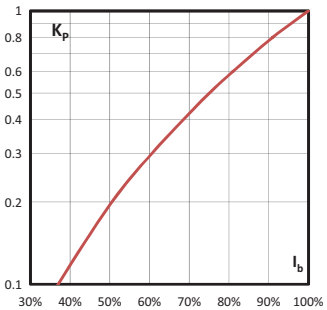
Arc voltage

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

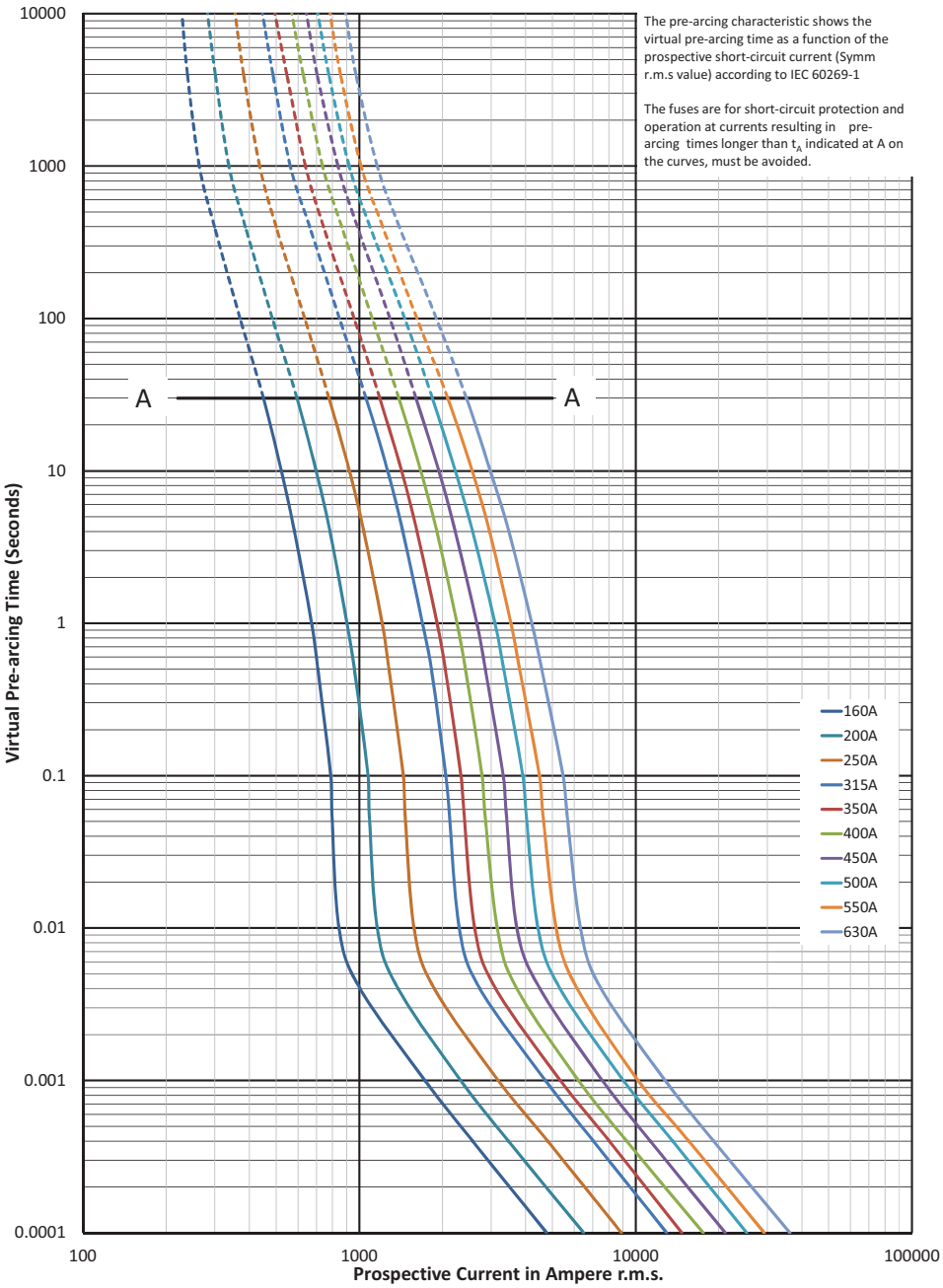
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p, is given as a function of the RMS load current, I_b, in percent of the rated current.



Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - Sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 1, 160 A to 630 A

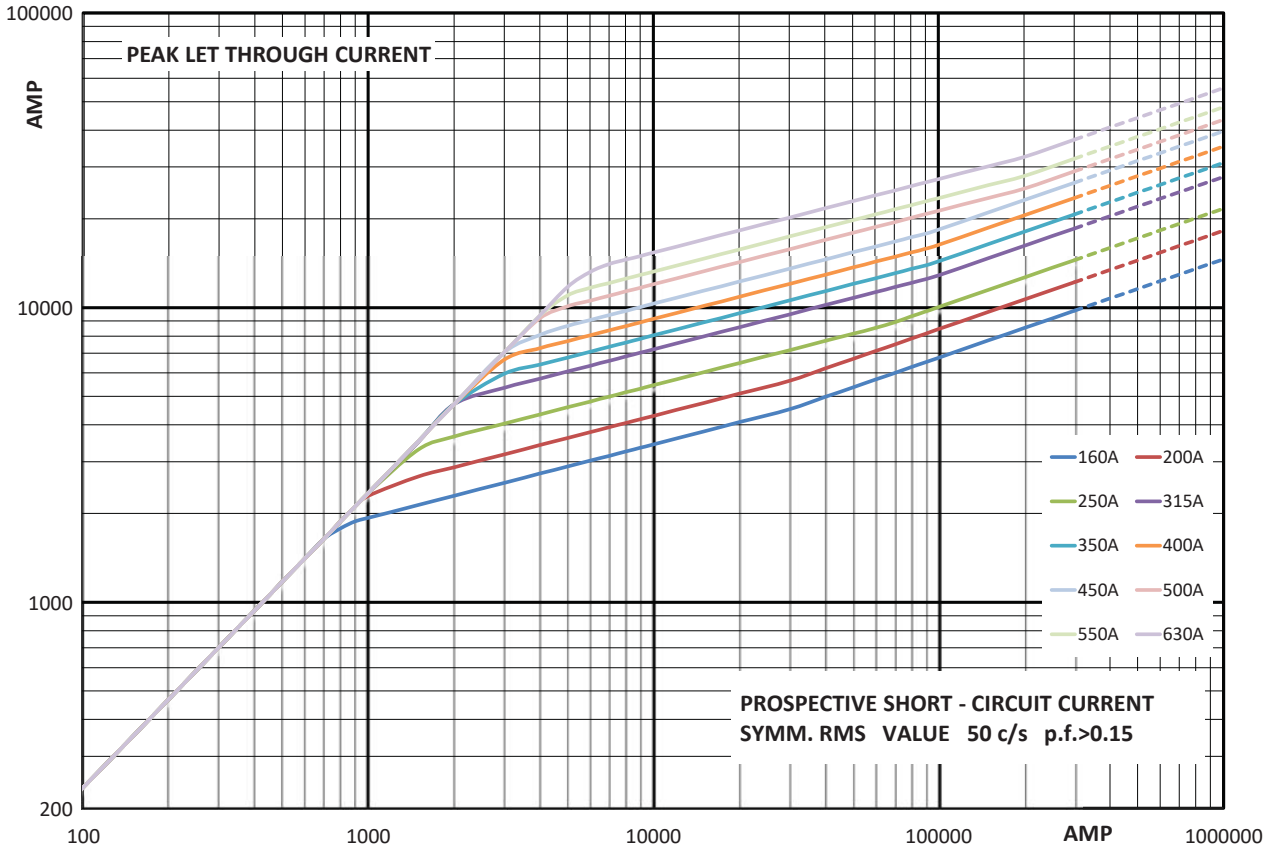


K_b = 1 N = 1.6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

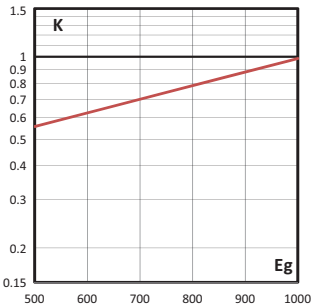
170M - Sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 1, 160 A to 630 A



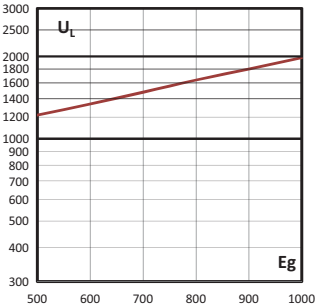
Total clearing I^2t

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).



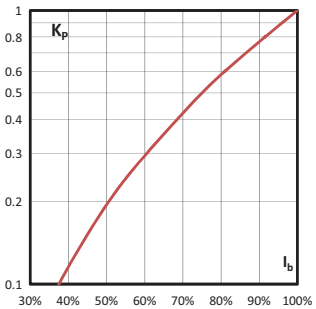
Arc voltage

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

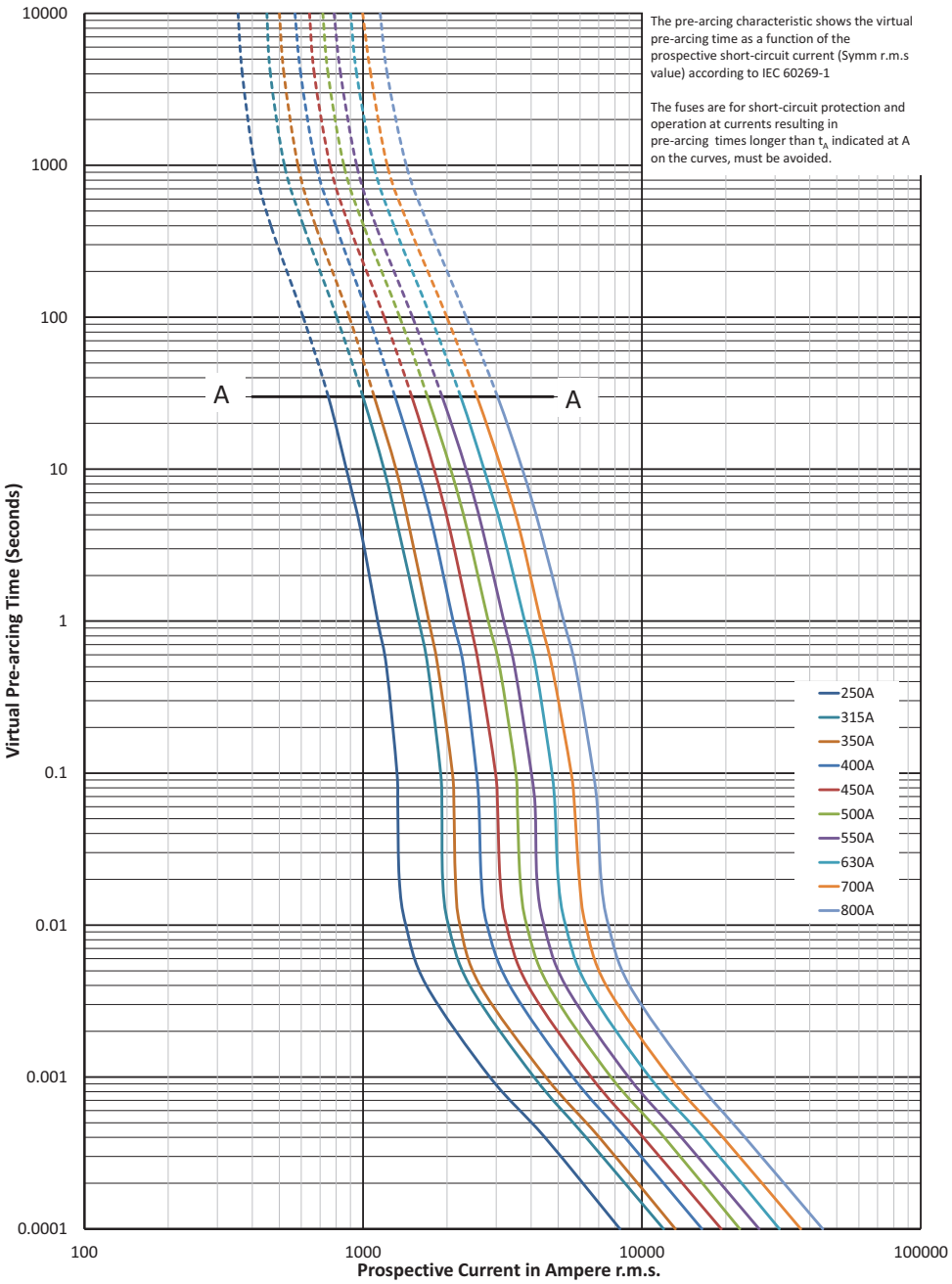
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p , is given as a function of the RMS load current, I_b , in percent of the rated current.



Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - Sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 2, 250 A to 800 A

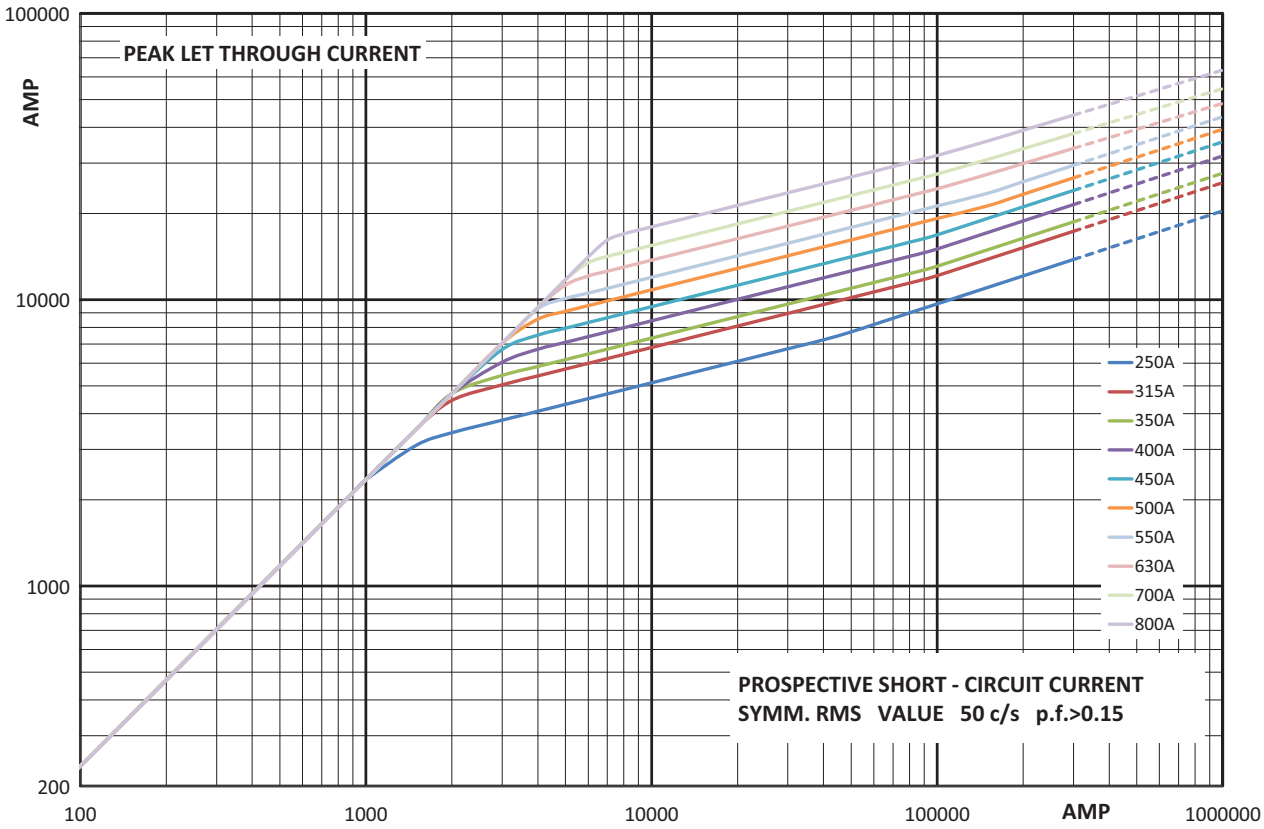


K_b = 1 N = 1.6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

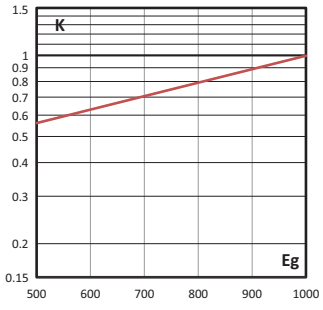
170M - Sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 2, 250 A to 800 A



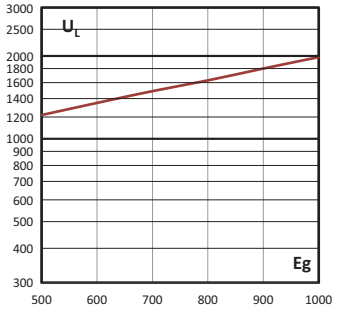
Total clearing I²t

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).



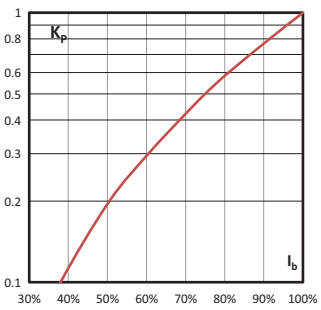
Arc voltage

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

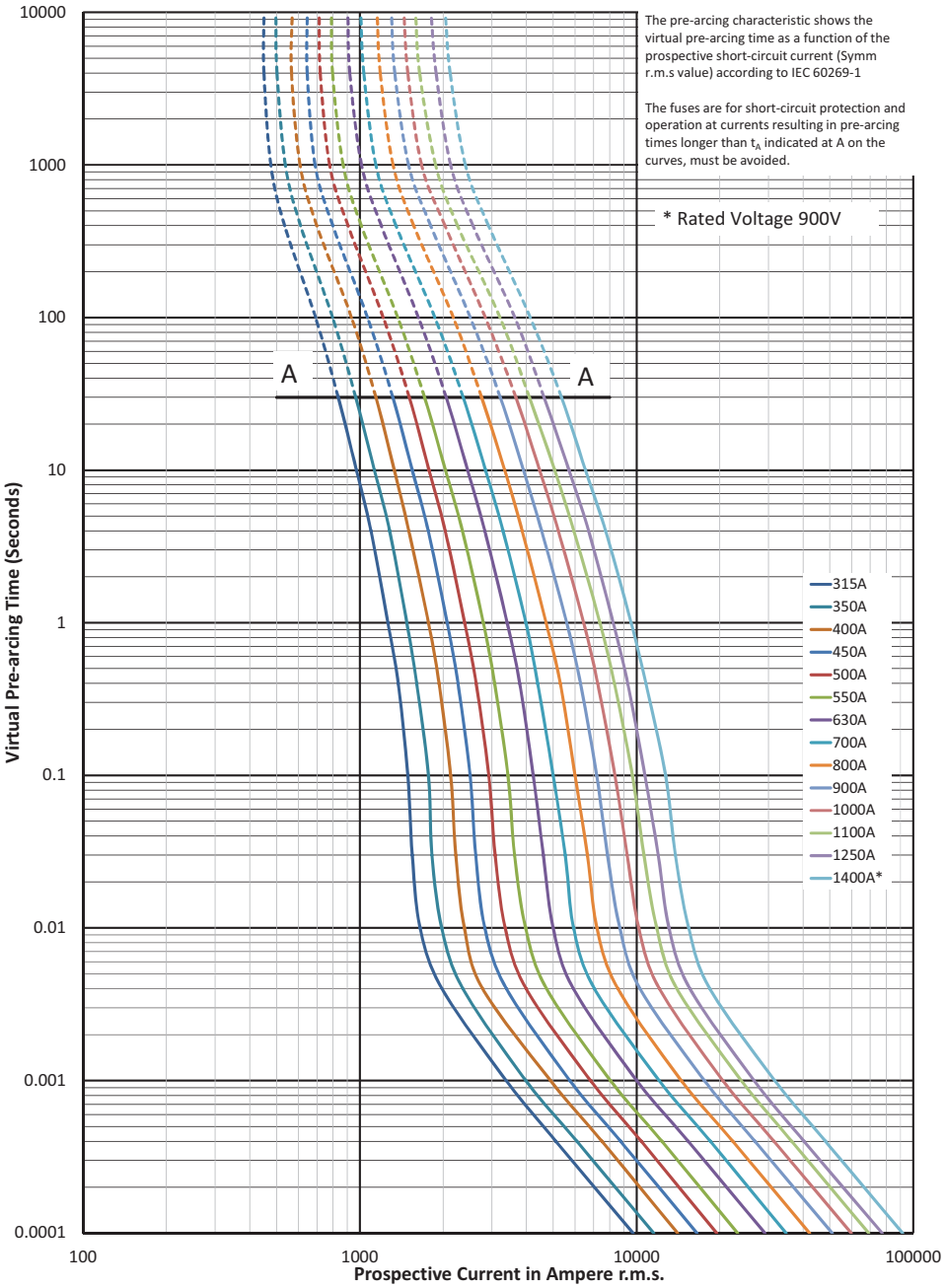
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p , is given as a function of the RMS load current, I_b , in percent of the rated current.



Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

170M - Sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Time-current curve - Size 3, 315 A to 1400 A

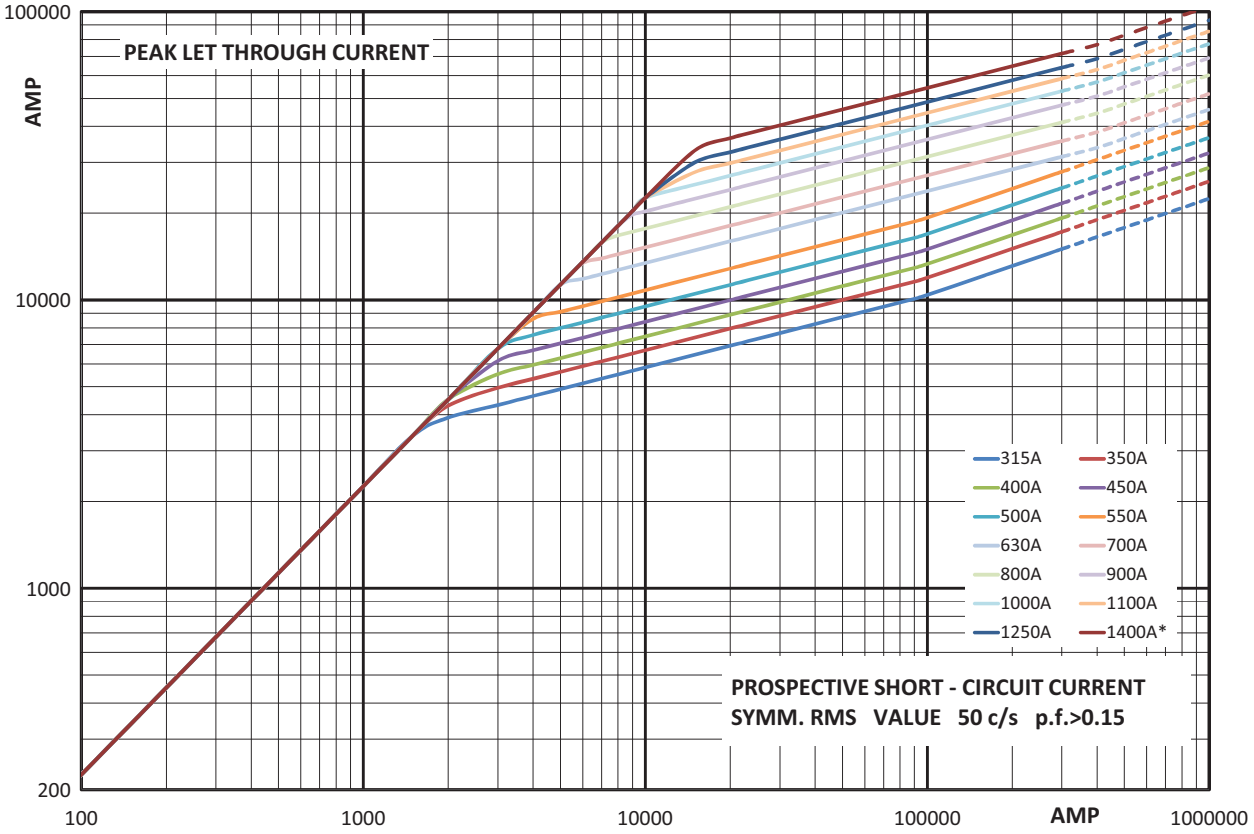


K_b = 1 N = 1.6

Data sheets: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

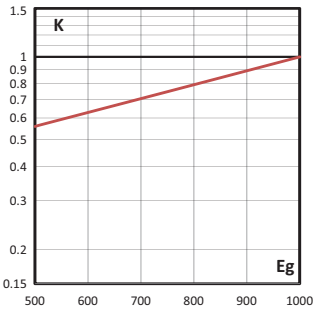
170M - Sizes 1* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 3, 315 A to 1400 A



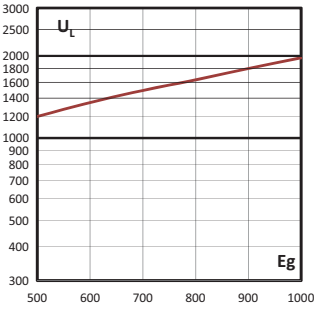
Total clearing I^2t

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).



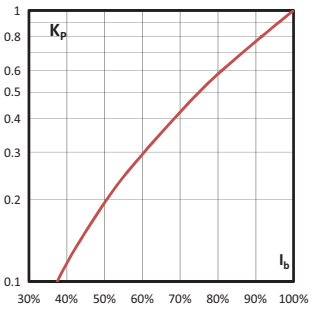
Arc voltage

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: 170K8564 (Size 1*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)